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PRINCIPLES
OF
THE HUMAN MIND,
AND
THE VOLTAIC MECHANISM OF MAN.

PRINCIPLES
OF
THE HUMAN MIND,
DEDUCED FROM PHYSICAL LAWS;
TOGETHER WITH A LECTURE ON
ELECTRO-BIOLOGY,
OR
THE VOLTAIC MECHANISM OF MAN.

BY ALFRED SMEE, F.R.S., 186-187+
SURGEON TO THE ROYAL GENERAL DISPENSARY OF LONDON, AND LECTURER
ON SURGERY, ETC., ETC.

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BI-OL'O-GY, the SCIENCE OF LIFE;
a term introduced by TREVIRANUS of Bremen, in place of
Physiology.—LAWRENCE.

~~~~~  
STEREOTYPED BY C. C. SAVAGE,  
13 Chambers Street, N. Y.  
~~~~~

98

PUBLISHERS' PREFACE.

ALL investigations relating to the **HUMAN MIND** must necessarily attract the most profound attention of every intelligent individual. The increasing demand for works on **PSYCHOLOGY, PHRENOLOGY, MAGNETISM**, and other kindred subjects, have excited to action many of the leading minds of our own and other countries. Hence, new and startling developments are constantly being made, and our store of knowledge increased. We are not aware that the author of this work has before been introduced to the American public, yet his name is favorably and widely known in England and France, where his various works have been extensively circulated.

It will be our object to publish all works, the tendency of which shall be to advance the race in **MORAL, INTELLECTUAL, and PHYSICAL** improvement.

FROM THE AUTHOR'S PREFACE.

“I apprehend that the time is fast approaching, when no other system of mental science will be acknowledged but that which is based upon physical laws and the structure of the brain; and if my researches shall be found hereafter to have contributed to the development of true philosophy, I shall indeed feel more than amply rewarded for the hours of anxious but delightful labor spent in its development.”

CONTENTS.

PRINCIPLES OF THE HUMAN MIND.

| | |
|---------------------------------------|--------|
| Knowledge of the External World | PAGE 9 |
| The Senses | 10 |
| Combination of Senses | 11 |
| Infinity | 11 |
| Time | 12 |
| Cause | 12 |
| Pleasure and Pain | 13 |
| Memory | 14 |
| Consciousness | 14 |
| Instinctive Ideas | 14 |
| Reflection | 16 |
| Judgment | 16 |
| Imagination | 17 |
| Action | 17 |
| Specific Action | 18 |
| Hope and Fear | 19 |
| Desire | 19 |
| Virtue and Vice | 19 |
| Moral Law | 20 |
| Volition | 20 |
| Free Agency | 20 |
| CERTAIN SPECIFIC IDEAS. | |
| Life | 21 |
| Death | 21 |
| Mind | 21 |
| Organization | 21 |
| Future State | 22 |
| DISEASED STATES OF THE MIND. | |
| Insane Ideas | 23 |
| DEFECTIVE STATE OF MIND. | |
| Idiocy | 24 |
| Loss of Memory | 24 |
| Fits | 24 |
| Fatuity | 25 |
| Loss of Sensation | 25 |
| Paralysis | 25 |
| Sense Imbecility | 25 |
| Varieties of Races | 26 |

| ELECTRO-BIOLOGY ; OR, THE VOLTAIC MECHANISM OF MAN. | |
|--|------|
| Definition of Electro-Biology..... | PAGE |
| Office of the Nerve-Fibre | |
| Fluid Telegraphic Conductors..... | |
| Nerve-Fibre | |
| Gutta-Percha Tubes..... | |
| The Voltaic Current in a Fluid..... | |
| How to make a Piece of Metal Positive and Negative | |
| Value of the Electro-Voltaic Test..... | |
| Passage of the Voltaic Current..... | |
| Introduction of two Steel Needles into a Rabbit..... | |
| Sensations—How received and expressed | |
| The Photo-Voltaic Circuit..... | |
| Positive Photo-Voltaic Circuits..... | |
| Negative Photo-Voltaic Circuits..... | |
| The Eye supplied with Nerve and Blood | |
| Vision a Voltaic Phenomenon..... | |
| Blood and Nerve distributed to the Ear..... | |
| Blood and Nerve to the Nasal Organ..... | |
| Electric Action excited by Odors..... | |
| Voltaic Force excited by Savors..... | |
| Impressions or Sensation upon the Skin | |
| Thermo-Voltaic Circuits | |
| The Mechanism of Feeling is Voltaic | |
| How Sensations are received..... | |
| Completion of the Electro-Biological Circuit..... | |
| Office of a Commissure | |
| The Combination Battery | |
| How to produce a perfect Fac-simile Picture..... | |
| How Ideas are derived | |
| Sensor and Motor Nerves opposed | |
| Copper more easily reducible than Zinc | |
| The Electric Battery of Fishes..... | |
| The Artificial Electric Eel | |
| Perfection of Nature's Operations..... | |
| Man a Double Voltaic Circuit..... | |
| How to supersede the Steam Engine | |
| Force generated by the Voltaic Battery..... | |
| The Voltaic Circuit in Animals | |
| How their Electric Current is set in Motion | |
| The Functions of the Blood-Corpuscle in the Human Body | |
| Circulation of Blood stopped by Electricity..... | |
| All Sensations of Animal Life are Voltaic Effects | |
| Life is one Word used to signify a number of Changes | |
| Inference from the Teachings of Electro-Biology..... | |

PRINCIPLES OF THE HUMAN MIND.

KNOWLEDGE OF THE EXTERNAL WORLD.

1. Our ideas of the external world arise, primarily, from an action upon the ultimate nervous fibres of the organs of sensation, by the specific stimulus competent to excite each organ of sensation respectively.

2. Each primitive nervous fibril is called a unit; the repetition of units, *Number*.

3. That which is competent to act upon these nervous fibrils is called *Matter*.

4. Whenever matter undergoes any change which renders it appreciable to our senses, it is said to evince *Force*.

5. The definite combination of nervous fibres excited to action, determines the *char-*

10 PRINCIPLES OF THE HUMAN MIND.

acter of the idea presented to the mind, such as form, position, magnitude.

6. Each combination may be expressed by a word or cipher, and forms a definite image. The use of words is called *Language*.

7. The sum total of all the possible combinations of the ultimate nervous fibril, excited to action, comprises all the possible images which can be represented to the mind.

8. Inasmuch as the possible combination of all the nervous fibrils is immensely numerous, so are the images which may be reflected in the mind immensely numerous.

SENSES.

9. An idea is represented to the mind, when any one or more of the filaments of either specific organ of sensation is excited without reference to the definite image thereby produced.

10. This solitary idea, derived from the fila-

ments of the eye, is termed *Vision* ; of the ear, *Hearing* ; of the nose, *Smelling* ; of the palate, *Tasting* ; of the skin, *Feeling* ; and, probably, from the nerves communicating the changes occurring in our own body, *Personality*.

COMBINATION OF SENSES.

11. The perfect knowledge of any object is obtained by impressions received by the sum of the organs of sensation.

12. But as matter may exist without exciting all the organs of sensation at one time, we determine the combination of senses which has concurred to give us the knowledge of any external object.

INFINITY.

13. An idea is represented from the excitement of one or all the nervous fibrils of any organ of sensation indiscriminately. This

12 PRINCIPLES OF THE HUMAN MIND.

idea is infinite, inasmuch as it is indivisible, incapable of addition, and represents totality.

TIME.

14. Our knowledge of the external world in any given period, is the sum total of the images from all our senses.

15. These images represented to the mind are perpetually changing.

16. When images change, one remains the same while the other changes perhaps several times before the first changes. The relation of these changes to each other is termed *the time of their occurrence*; that which changes the least frequently is said to be of *the longest duration*.

CAUSE.

17. In the change of images, when one specific image never appears without a similar

* Infinity is sometimes confounded with its hyperbolical use in the sense of endless number.

antecedent, and the matter in the external world which gave rise to the first image set in motion the second — the antecedent image is said *to cause* the second image.

18. The mind finds great difficulty in distinguishing between concomitance and cause, because the matter which produces an antecedent image may not set in motion the matter which produced the second image.

PLEASURE AND PAIN.

19. When images of the external world are produced with a certain intensity, the idea of *Pleasure* is excited; when with a greater intensity, the idea of *Pain*.*

20. The transition from Pleasure to Pain being sudden, not gradual, it follows, that the nature of the action on the brain—and, consequently, of the ideas—is different.

* Every action of our lives is either pleasurable or painful; and thus we perceive how vastly the former state preponderates over the latter.

14 PRINCIPLES OF THE HUMAN MIND,

MEMORY.

21. An image once formed in the brain produces an indelible impression, and may at any future time recur. This property is called *Memory*.

CONSCIOUSNESS.

22. When an image is produced by an action upon the external senses, the actions of the organs of sense concur with the actions of the brain; and the image is then a *Reality*.

23. When an image occurs to the mind without a corresponding simultaneous action of the body, it is called a *Thought*.

24. The power to distinguish between thought and a reality, is called *Consciousness*.

INSTINCTIVE IDEAS.

25. Several ideas must necessarily co-exist giving rise to compound ideas always existing in the brain: thus, personality and infinity give us the idea of the Soul; pleasure and infinity

of Good ; pain and infinity, of Evil ; cause and infinity, of God ; time and infinity, of Eternity ; infinity, pleasure, and time, of Heaven ; infinity, pain, and time, of Hell.*

26. These instinctive ideas are not produced by the immediate action of external influences, but have their origin in the construction of the brain, or organ of thought.

27. Instinctive ideas belong to the higher class of mental images ; and there is no reason to suppose that a more simple idea is implanted in the human species. In the lower animals, however, it is apparent that either other images exist, which guide the creatures to perform their operations—as the bird to build the nest, the bee the honeycomb—or, that the nervous system is so constructed that the crea-

* As these instinctive ideas are simply thoughts, and can not be proved by our external senses, the mind may be led at times to deny the reality of their existence. Revelation, however, declares their truth, and thus compensates for the natural weakness of man.

16 PRINCIPLES OF THE HUMAN MIND.

ture is led to perform specific acts under some definite excitement.

REFLECTION.

28. When images already implanted in the brain, which possess many points in common, continually reappear, the party is said to be reflecting.

29. During reflection, the influences of the external world to produce new images are entirely, or to a great part, neglected.

30. By reflection, ideas may be combined so as to form general laws.

31. By reflection, general laws may be applied to specific instances, or images may be analyzed into their component parts.

JUDGMENT.

32. When an idea is represented to the mind, it either accords or discords with other ideas previously received, or with general laws resulting therefrom, or with the moral law.

The determination between this concordance or discordance is called *Judgment*.

IMAGINATION.

33. Man has the power of uniting two or more antecedent images, or the parts of two or more antecedent images. By this power, a totally new image is formed, and hence it is called *Imagination*.

34. Observation is the basis of fancy; and the novelist is fruitful only in proportion as he stores his mind with natural images.

ACTION.

35. Man acts by electricity, which is set in motion through the muscular structures, whereby contraction ensues, and parts of the body are moved.

36. Action may be produced by the immediate influence of the external agents upon the body, which give rise to a new image in

the brain; and action may also be produced by the recurrence of a former image.

SPECIFIC ACTION.

37. The mind is one and indivisible; and thus the particular muscular movement, which the electrical force determines, is not regulated by an immediate image, but by every other image which has at any former time been implanted in the brain.

38. Pleasure and pain regulate all action; hence the particular movement which is determined arises from the pleasurable or painful character of all former images; as animals, well as human beings, seek those actions which are likely to be pleasurable, and eschew those which are likely to be painful.

39. But the action determined in any particular instance may be painful for the sake of obtaining greater pleasure at future periods; and the idea of obtaining infinite

pleasure may allow of the most intense immediate pain.

HOPE AND FEAR.

40. The idea of future pleasure is called *Hope*; of future pain, *Fear*. The government of mankind is conducted by exciting *Hope* and *Fear*.

DESIRE.

41. When a tendency to act exists, it is called *Desire*; and always exists, more or less, when a being is in good health, and in a state free from fatigue.

VIRTUE AND VICE.

42. All actions, in the higher generalizations, would give the idea either of infinite pleasure or of infinite pain. Actions which concur with those which lead to infinite pleasure, are called *Virtuous*; and those which lead to infinite pain are called *Vicious*.

MORAL LAW

43. The moral law, being infinite, is content to control all actions. It is therefore important that it should be frequently, and strongly impressed upon the human mind.

VOLITION.

44. The resultant of the force of an immediate stimulus, and of all former ideas planted in the brain, is termed *Volition*.

FREE AGENCY.

45. A man is born a free agent; but as images are once implanted, he is compelled to act from the ideas existing in his brain. Hence, could we but tell the exact ideas which any human being possessed, it would be practicable to foretell his line of action under a defined circumstance.

CERTAIN SPECIFIC IDEAS.

LIFE.

46. The term Life is assigned to the idea which the mind forms of the capacity of an organized being to perform its functions.

DEATH.

47. The term Death is assigned to the idea which the mind receives of an organized being, incompetent to perform the vital action.

MIND.

48. The term Mind is assigned to the general idea of any action of the brain, which is a part of the organization of man. An idea is the term assigned to any specific action in the brain.

ORGANIZATION.

49. Organization is the term assigned to the construction of a being to adapt it to perform *certain functions*.

FUTURE STATE.

50. The mind has constantly represented it the idea of a personality which will exist infinitely.

51. While, however, the idea exists, we have no power to learn the properties of finity; and hence we can not define the nature of the state in which we shall live hereafter.

DISEASED STATES OF MIND.

INSANE IDEAS.

52. Whenever an idea appears in the brain which is neither instinctive nor is due to external causes, nor is deduced by the ordinary operation of the brain, it is said to be an *Insane Idea*.

53. When this idea is continuously the same, the party is said to have a *Monomaniacal*

54. When various images appear and vanish

indiscriminately, the state is called *Incoherence*; and when this state is combined with more or less unconsciousness, it is termed *Delirium*.

55. The danger of insane ideas depends upon the *distinctness* with which the idea is impressed upon the brain; for it will determine the party to act in proportion to the power with which it is impressed.

56. To the violent actions arising from strongly-implanted diseased ideas, the term **MANIA** is given; and the violence of the *Mania* is proportionate to the power of the delusion. To the individual it is an exaltation of pleasure.

57. When, from the delusion, the patient is in continual fear, he is said to be *melancholy*; and it is probably, to the individual, an exaltation of pain.

58. When a fixed insane idea exists in the mind, the party can not be said to be partially

deluded ; for, inasmuch as the mind is one and indivisible, it will control all actions.

59. A strong moral impression may counteract an insane image, as a party may be kept from doing wrong, by feeling assured that it will lead to present or future inconvenience to himself.

DEFECTIVE STATE OF MIND.

IDIOTCY.

60. When the structure of the brain is congenitally defective, so that it can not perform all its normal actions, the party is said to be an idiot.

LOSS OF MEMORY.

61. Sometimes the power of memory is intermittent, or is totally lost, as after the frequent recurrence of epileptic fits.

FITS.

62. Any interval of unconsciousness, except sleep, is called a Fit.

III. LOSS OF SENSATION. **FATUITY.**

63. When, from loss of memory, or want of power in the brain, the functions of reflection or judgment are not perfectly performed, the individual is said to be *fatuous*.

LOSS OF SENSATION.

64. Sometimes the power of receiving impressions from the external world is diminished or lost, as in blindness, deafness, etc.

PARALYSIS.

65. When parts of the body do not move by volition, they are said to be paralyzed.

SENILE IMBECILITY.

66. In old age, the brain loses its power to receive new images, to restore by-gone impressions, to connect different images, or to apply general laws to specific instances. That which ennobles the man has passed away; the outward form remains, but the inward structure has lost its power to act. Childhood aga

ensues — not to acquire new ideas, but to forget those before implanted. All that is beautiful or desirable in this world has passed away — the brain has lost its power — the mind ceases — the very existence of the man is unknown to himself, till death gives rise to a new life, and discloses that new and glorious state in which our organization teaches us that man will be immaterial and immortal.

VARIETIES OF RACES.

67. As individuals differ in their organization, it follows that they differ in their capacity to perform various acts, and we may presume that the mind being one of the functions of the body, is of varying power in different individuals.

68. The observations which apply to different individuals, apply with greater force to different races.

There is a great deal of
work to be done in the
field of the study of the
history of the world.
The study of the history of the world
is a very important part of the study of the
history of the world.

ELECTRO-BIOLOGY;

OR,

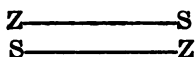
THE VOLTAIC MECHANISM OF MAN.

ELECTRO-BIOLOGY literally means, neither more nor less than the relation of electricity to the vital functions. Now, systematic writers divide the vital functions into two great classes—into those of animal life, and into those of organic life.

The functions of animal life will particularly occupy our attention at present; and for their consideration, we shall have to study the apparatus by which the animal receives impressions from the external world, transmits them to the *brain*, registers them, combines them,

and acts, not only upon the immediate impressions, but also upon those which it has received at former periods.

For the manifestation of the functions of animal life, we require a central parenchyma or brain, a peripheral or body, the two being connected together by a peculiar tissue called "nerve-fibre;" and at both situations a proper supply of bright arterial blood is requisite, for the production of the phenomena of life. If we look to purely physical contrivances, we find that similar conditions are fulfilled by a double voltaic circuit



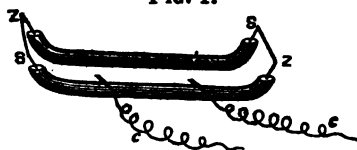
If we abstract the proper exciting fluid from either end, or substitute any other fluid, or destroy the structure at one end or the other, divide the connecting portions or wires, the effects proper to the apparatus will not be manifested, and the battery will be destroyed. The analogy between the mechanism of

double voltaic circuit and that of animal life is quite complete; for if we pith an animal (an operation which separates the brain from the body), or remove the blood from the brain, or from the peripheral part, or destroy the structure of either the brain or the periphery, action is stopped; and animal life ceases.

You will at once say, doubtless, that man has no metallic wires, no plates; and therefore, you may naturally ask, how far does that fact destroy the analogy which I have given to you? It is not necessary, however that the connecting portions should consist of metal; and though all present are doubtless accustomed to see the electric telegraphic wires along the course of the railways, yet I have here upon the table an example of fluid telegraphic conductors, which answer as efficiently for the conducting of the voltaic force, as wires or metals. Those among you who reside at Upper Clapton, may remember some time since

having seen mysterious wires placed at an elevated situation round the Horse-shoe Point of the River Lea. At the time these wires were in that situation, I was experimenting upon the conducting power of liquids, and they were found to possess that property in an extraordinary degree. If the nerves, however, can bear the voltaic force, they might perhaps be expected to have within themselves some means of insulation, and from my own microscopic examination of nerve-fibre perfectly fresh, I believe that a layer of fat exists in the interior of each primitive fibril, which would as efficiently insulate it as the gutta-percha of a tube does these artificial nerves which are placed on the table.

FIG. 1.



Double voltaic circuit, with gutta-percha tubes; Z, zinc; silver; C, C, copper wires for electro-voltaic test.

In this double voltaic apparatus before you, in which the communicating portion consists of gutta-percha tubing, filled with acid and water, a powerful voltaic current is passing, but one which will yield no indications of its presence to ordinary voltaic tests. It is no easy matter, gentlemen, to prove the presence of a voltaic current in a fluid, and for a long period I did not know how to proceed to render its existence certain. However, at last I observed if any metal capable of being oxydized was interposed in the path of a voltaic circuit, that one portion becomes positive, the other negative; and that this result is no fanciful chimera, I now show you an electro-metallurgic precipitating trough, in which a piece of copper is inserted between the positive and negative plates, and you will at once perceive that the portion near the negative pole has become acted upon or positive, the part nearest the positive pole *has become negative*, and has metallic copper

deposited upon it. From this experiment I saw that a mode was afforded to me of ascertaining the presence of a voltaic circuit in a fluid. To give you a practical illustration of the value of the electro-voltaic test, I have introduced two copper wires (fig. 1, C C) in one of the gutta-percha tubes constituting an artificial nerve, and you will perceive that the moment I connect them with a galvanometer deflection ensues. Animal bodies consist solely of membranes and fluids, and therefore, in the order of my investigations, I had to study batteries solely composed of similar materials. This form of voltaic circuit is extremely difficult to investigate, though one is placed upon the table for your inspection.

After I had thoroughly studied the electro-voltaic test, the time arrived to ascertain whether a voltaic current was actually passing during nervous action. For although the analogies which I have detailed were, to my mind

complete, yet analogy would be useless without the corroboration of direct experiment. My first experiment was, to introduce two steel needles into a rabbit; the first into the masseter, or muscle which enables the creature to masticate; the second, into the subcutaneous cellular tissue. After two or three minutes, the creature, which was very tame, attempted to bite my finger; the power of volition was sent to the muscle; this acted upon my electro-voltaic test, and you may judge of my inexpressible delight, when the deflection of the needle showed to my mind the mechanism of volition. These needles being between the skin and muscle, the course of the voltaic circuit is clearly demonstrated to exist between these two points, and therefore each required a most minute consideration.

Sensations are received by various organs which are destined to be acted upon by certain physical forces, as the eye by light, the

ear by sound, the nose by odors, the tongue by savors, or the skin by heat or force.

It is quite certain that if a voltaic circuit is generated in the eye, there must be such contrivances as photo-voltaic circuits, that is, voltaic circuits in which light causes the evolution of electricity. In trying the experiment, I found that there were not only an extensive series of combinations in which the sun's rays determine the generation of electricity, but that in one division light caused a positive voltaic circuit; in the second, a negative voltaic circuit. The table of these circuits will illustrate the manner in which these circuits are formed, by using solutions so arranged that one portion may be screened from the light, and the second may be acted upon powerfully by the sun's rays.

POSITIVE PHOTO-VOLTAIC CIRCUITS.

Mixed solutions of per-nitrate of iron and red ferrocyanate of potash.

Mixed solutions of bromine water, phosphorus water, and per-nitrate of iron.

NEGATIVE PHOTO-VOLTAIC CIRCUITS.

Mixed solutions of proto-sulphate of iron and nitrate of silver.

Mixed solutions of gallic acid and nitrate of silver.

Mixed solutions of oxalic acid and chloride of gold.

Mixed solutions of ferrocyanate of potash and ammonio-per-citrate of iron.

Mixed solutions of ferrocyanate of potash and ammonio-per-tartrate of iron.

Mixed solutions of ferrocyanate of potash and potassio-tartrate of iron.

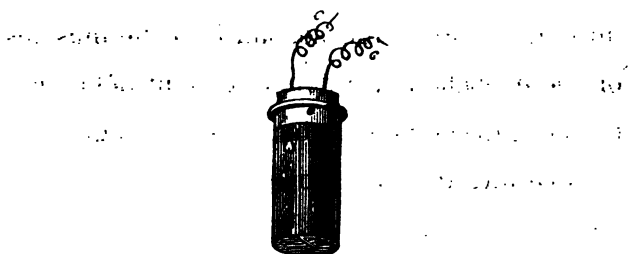
These experiments I can not show now, because it requires the sun's rays to shine upon one side of my apparatus; but from what I have stated, you will perceive that it is quite within the range of ordinary physical effects to have voltaic circuits set in action by light.

Having developed photo-voltaic circuits, the eye itself next demands our attention; and we find nerve and blood to be abundantly supplied to that organ. The electro-voltaic test

is best applied by the insertion of one needle into the choroid, the second into the muscle of the eyeball, and I found a slight deflection of the galvanometer when a strong light was thrown into the eye, proving that vision was voltaic phenomenon.

The essential part of the organ of hearing is encased in textures of such extreme hardness, that it will probably be for ever prevented from being the subject of direct experiment. In the cochlea, I believe we may reasonably assume that the pitch of the note is determined; and in the semicircular canals which are placed in the three orthogonal planes of a cube, physiologists are pretty generally agreed that animals learn the direction of sound. Blood and nerve — essentials to voltaic action — are here distributed, and no physical difficulty is presented to the probability of a voltaic circuit being determined by *sounds*.

shown are by contact. **Fig. 2.**



Apparatus showing the generation of a voltaic circuit by odors.

The nasal organ is, like the ear and eye, liberally supplied with blood and nerve-fibres. The voltaic circuit is easily demonstrated by the electro-voltaic test; but the animal has an extraordinary repugnance to the operation, and you must be extremely careful not to be deceived by other secretions which are competent to set up the voltaic action. I can very readily show you that it is not at all difficult to form voltaic circuits, in which odors should excite the electric action. The tube which I hold in my hand contains two iron plates, which are separated by a membrane, and on *each side* pieces of sponge, dipped in very

dilute muriatic acid, are arranged. Now, if ammoniacal vapor, which produces the most powerful action on the natural nose, is brought under one side of the diaphragm you perceive that a very strong action of the needle is immediately produced. The experiment which I have selected is one which shows the result easily, rapidly, and in a very marked manner; but I should not think it a bold assertion to declare, that with a little trouble and patience I could exhibit voltaic effects, although perhaps to a less marked extent, with every other odoriferous body.

FIG. 3.



Apparatus showing the generation of a voltaic circuit by savor.

When an animal tastes, the matter which contains the savor comes in immediate contact with the tongue, and is there probably

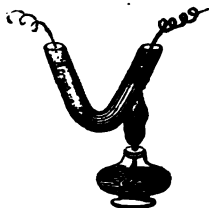
absorbed. I need hardly state, that the essentials for sensation, blood, and nerve, are abundantly supplied to that organ. With respect to physical contrivances analogical with the tongue, it is very easy to show voltaic force excited by savors; and I have here a V-shaped tube, containing a solution of perntrate of iron, and two platinum poles, which exhibit by themselves no signs of electric action. As soon, however, as I drop a little infusion of meat into one side of the tube, you will instantly perceive that the galvanometer shows signs of action. There is no mystery about the meat, as sugar, or, in fact, any other savor, would have had a similar property in a greater or less degree. The direct examination of the tongue in the living animal affords unsatisfactory results, inasmuch as secretions in the mouth are very apt to give wrong results—a circumstance which should be very carefully guarded against.

The last organ of sensation to which I have to beg your attention is THE SKIN. Now, by the ordinary sensor nerves, we derive two sets of impressions of somewhat different characters—for instance, we are enabled to judge of impressions upon the body by either heat or force, or what may be termed cænaisthenics. We are also enabled to judge of the changes taking place within our own body, which estimation may be more properly called somaisthenics. By somaisthenics we are enabled to estimate the slightest muscular motion, and, in fact, I can not move my finger or my arm to even the slightest extent without having a perfectly distinct idea of the amount of motion produced.

The skin is acted upon by variations of temperature and force; hence we have to inquire how far heat and force can be employed to set in motion the voltaic force. In experimenting upon the variations of temperature, I

found a large series of thermo-voltaic circuits, which, curiously enough, are analogical to photo-voltaic circuits, inasmuch as heat, at various times, determines both negative and positive circuits in the same manner as light. I have here a negative thermo-voltaic circuit.

FIG. 4.



Thermo-voltaic circuit in which the voltaic force is produced by heat.

The apparatus, as you perceive, consists of a V-tube, containing sulphate of copper (fig. 4). Into each side of the tube a copper wire is place, and you perceive, that the moment I apply the heat of a spirit-lamp to one side, the galvanometer is very strongly deflected, the heated side becoming the negative pole.

When force acts upon the skin, I presume

the blood corpuscle is prevented from coming in contact with the termination of the nerve fibre; and I will beg you to bear this supposition in mind, as in a later part of this lecture I shall demonstrate to you, that if this supposition be correct, a voltaic circuit must be generated. My observations upon heat and force simply indicate that a thermo- or dynamo-voltaic circuit is an ordinary voltaic physical phenomenon; but that by no means proves that in the living body the mechanism of feeling is voltaic. This, however, is an experiment easily shown, for we have but to introduce our electro-voltaic test into the cutaneous textures, when a powerful deflection of the galvanometer occurs whenever we pinch or otherwise irritate the skin. We then find that the mechanism of all the sensation is voltaic, and according to the laws of the voltaic test, the needle nearest the negative pole becomes positive; that nearest the positive

positive pole, negative. From direct experiment, I should therefore infer, that the organs of sensation all constitute the positive pole of the peripheral battery. These inferences, however, must always be taken with a proper allowance for the complex character of the voltaic circuits in the body, or rather, I would say, for the complex materials of which the circuit is composed.

Sensations are received by a certain definite number of sensor nerves, which constitute the only means we possess of obtaining a knowledge of the external world. The sensor nerves pass to the brain, and then come in contact with a highly vascular tissue, called the gray matter of the brain; and I invite your attention to the very exquisite injections which I have made of that tissue, by means of the solution of carmine, and which will be exhibited under the microscope in the library after the lecture.

Inasmuch as the sensor nerves come in contact with blood-vessels, it follows from voltaic laws, that a voltaic battery exists in the brain which is opposed to that in the body, and in which the electro-biological circuit is completed. At this point we leave the regions of direct experiment, and we must deduce the mechanism of the central battery according to voltaic laws on the one hand, and the properties of the mind on the other.

I infer that the sensations are simply repeated in the brain, nerve for nerve, action for action, and this first battery I term the sensation or aisthenic battery; the second pole of this battery is probably connected with the corresponding fibre of the opposite side, what anatomists call a commissure, and which I have illustrated on the table by voltaic arrangement.

We have represented to our minds, not only *simple sensations*, but also combined impressions.

signs; thus, while I am looking at all the parts of this theatre, one impression — namely, that of a theatre — is brought before my mind. There is no difficulty in obtaining this result by voltaic means; and the mechanism by which I believe it to be accomplished I have termed the syndramic or combination battery. Thus, if we have three primitive nervous fibrils, *A, B, C*, they may be thus combined: *A B, A C, B C, A B C*. The diagram behind me illustrates this mode of combination; and here, upon the table, I have the voltaic arrangement itself; and you can not fail to observe that these wires, even on this very limited scale, begin to look like the interlacing which we observe in the brain.

If we divide any space into a certain number of squares, and give to each square a certain name or figure, it will be apparent, that by simply giving the names of the squares filled up with black, the word, or name, or

symbol, would at once be accurately described. I have divided this piece of paper into certain squares, and if I read you a certain combination of numbers, it would appear at first, to give no definite idea, but if you examine carefully, you will find that this combination of numbers brings out the word *WATER*. This word, I find, has been very unfortunately chosen, but in reality I only selected the word in illustration of the principle of combination because it only consisted of four letters, because each letter was so formed that it perfectly filled up square spaces.

Ladies constantly in practice take advantage of this principle in their patterns of worsted work; and it would be possible to describe a picture, up to the very limit of the powers of sensation, that it might, from description alone, be repeated in any country and yet be a perfect fac-simile.

I dwell thus long upon the syndramic

combination battery, because, in all probability, it constitutes a very large part of the brain. When we consider the large number of ultimate fibres in each organ of sensation, I do not think that we have reason to suppose every possible combination ensues; and even with regard to ordinary sentient nerves, I think that such a universal combination would be embarrassing to the mind, and that the combination probably would extend to the nerves of each separate region of the body. It is quite certain that we always know the specific sense by which impressions are learnt—that is to say, that we know whether an idea has been derived from the eye, nose, mouth, or other organ of sensation. This resolves itself into one idea for a vast number of sensations, and is a state which can very easily be imitated by voltaic contrivances. I have upon the table a voltaic arrangement of this character, in which but one action is pro-

duced from one or all the combinations will exist in the syndramic battery. In some cases ideas do not arise alone from action on one sense, but on two or more senses at one time—a combination which I infer to occur in syndramic noemic battery; and lastly, it is necessary to assume, that all these last combinations of each specific sense are connected together into one total in the pneuma-noemic battery, from the opposed pole of which dynamic or motor nerves spring.

The situation of this important battery somewhere in the base of the brain; and I believe that in applying the electro-voltaic in this situation, I have obtained deflection of the galvanometer. Let me, however, say with the utmost caution upon this point; although I have tried the experiment over and over again, the animal is almost invariably destroyed; and in fact, by the electro-biological maps which are suspended upon the wall,

will at once perceive that an action here influences every nerve in the body, and thus may very readily destroy vitality.

Now, what are the qualities of this last battery, which has but one impression for all the sensations of the body? We find that it represents totality, and can not be limited. It has therefore the properties of infinity, and gives to man his most exalted ideas. The ideas of soul, God, eternity, immortality, are obtainable from this battery, acting in conjunction with the lower batteries which I have already described. I regret exceedingly that the hour allotted for this lecture has now been so far spent that I am unable fully to consider the properties of the mind deducible from the theoretical structure which I have developed upon voltaic laws; but, under the circumstances, I feel bound to pass on to matters which can be elucidated by direct experiment.

When the voltaic force is carried by the

sensor nerves to the brain, it there can
 some change of matter, by which polarity
 ever after determined. This phenomena is
 physical result of the most ordinary kind ;
 I have here a solution of argento-cyanide
 potassium, with two copper poles, and, before
 the lecture, I passed a voltaic circuit from the
 pole to the second, by which I have effected
 change of matter, and silver has been precipi-
 tated on one side. You will now see, that
 immediately I connect the two poles with the
 galvanometer, a strong deflection will ensue
 and, to use a metaphorical phrase, the solution
 has remembered what I did to it. This experi-
 ment, which is but a sample of a class, may
 only be regarded as analogical, and is of
 valuable to show that voltaic electricity may
 produce effects which will ever after be ap-
 parent.

In the arrangement of the nerves of the
 body, every sensor nerve is opposed to every

motor nerve, and may excite it to action under certain circumstances. Now, before I consider this subject in detail, I may state that the voltaic circuit, when it has the choice of two or more roads, invariably takes the easiest route, to the exclusion of all the rest. Here is an arrangement, in which one of my platinized silver batteries is connected with two precipitating troughs, having the same distance to travel in both cases, but one is charged with sulphate of copper, the other with sulphate of zinc; and yet with this trifling difference the entire current has passed through the sulphate of copper, to the exclusion of the sulphate of zinc, because copper was more easily reducible than zinc, and therefore offered a somewhat easier passage to the voltaic force.

Upon examining the arrangement, I find that the experiment has been tried under the most trying circumstances, as I observe that the positive pole, in the sulphate of copper, is

almost entirely dissolved. Notwithstanding however, this, the law which I have developed and described in my *Electro-Metallurgy* holds good, though I must confess that I should not have risked the demonstration of this extreme application of the law, which fortunately, by accident, has brought the matter most strikingly under your notice.

From this law, we learn that the voltaic circuit would be completed, through the near motor nerve, when any sensation was excited unless obstacles were presented to its passage in that direction, or any circumstances favorable to its passage through any other motor nerve were afforded in some more distant part of the electro-biological circuit, when even the farthest motor nerve might be excited to action.

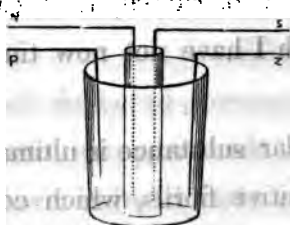
The action of every animal is determined then, not only by the impression received at the moment, but by every other event which

it has registered or remembered from the first moment of its life.

The motor nerves, by which the circuit is completed in the body, are distributed, in man, to the muscles; in other creatures to the electric organs; in others, to light-generating structure. The electric battery of fishes, as it is technically called, is composed of an enormous number of minute cells, supplied with blood-vessels. The nervous force, which I have already shown to be voltaic, acts at right-angles to the direction of the cells, and there produces some change of matter which instantly causes a powerful voltaic current.

I have here a glass vessel, containing a solution of ferrocyanate of potash, into the interior of which is placed a porous cell, containing a similar solution; a platinum pole is inserted into both vessels, for the purpose of connection with the galvanometer. Now, if I pass a voltaic current from the outside to the

Fig. 5.



Artificial electric eel: Z, S, connections to be attached to the battery; N, P, wires exhibiting the phenomena.

inside (Z S), no change of matter takes place in one part—the prussiate of potash remains the same; in the other, it is converted into the red prussiate. From this change, one side becomes strongly positive to the other; and you perceive that so powerful a current has been generated, that the needle completely swings round the instant connection is made with the galvanometer. I have only shown this experiment upon one cell; but it must be manifest to you, that, as every cell adds a certain amount of force, it simply requires a number to make a battery as powerful as that of an electric eel. The artificial electric eel

I have myself constructed, in a vast variety of ways, which I have not now time to consider.

The muscular substance is ultimately divisible into primitive fibrils, which consist of a sheath, called the sarcolemma, containing in the interior a peculiar matter, which, during the act of contraction, becomes wider and shorter; and this contraction is caused by a change of matter, produced by the voltaic force carried through the motor nerves.

I have here a strong piece of gut to imitate the sarcolemma, and into the interior of this I have placed fluid and pieces of platinized sil-

FIG. 6.



Artificial muscular substance.

ver. Upon the outer side of this gut is placed a strong piece of amalgamated zinc, so that the moment connection is made between the zinc and silver, gas is evolved, which renders the bladder wider and shorter, and thus moves this bar of wood over a space of three or four feet. (See fig. 6.)

The conditions of the natural muscle and artificial muscle are perfectly analogical; but possess a power only limited by the strength of the materials. In both cases, the power acts over the short end of the lever, and therefore at a mechanical disadvantage. In both cases it is a great power moving over a small space. I, however, can move my natural muscles much quicker than I can my artificial muscle; but you must please to remember that my organs are not competent to construct a machine having such fine tubes as we find in the ultimate muscular fibrils; and for want of this delicacy of construction, we sacrifice

the speed and rapidity of action observable in the perfection of Nature's operations.

Anxious to lay before you the leading experiments and deductions of this truly delightful subject, I have delivered this lecture with the utmost possible rapidity; and yet I see around me multitudes of experiments which I fear that I shall have no time to explain, as the hour has already passed. By your applause, I understand that you wish me to proceed; but as some of my audience live at considerable distances, I will only detain you by calling your attention very briefly to a few other points. In the first place, we find that man consists of a double voltaic circuit, and therefore we ought to consider the nature of the changes taking place in that voltaic circuit. Now, there are strong reasons to suppose that hydrogen and carbon act as the positive pole, and become changed in that capacity into water and carbonic acid. It would only re-

quire one thirty-second the quantity of the materials to produce any result that it would of zinc; and I can assure you, that many time have I sought diligently and carefully for a voltaic circuit which should be efficiently excited by carbon or coke as a positive element; and I can promise to the fortunate discoverer of such a combination the delight, being able to supersede the steam-engine, and the pleasure of successfully generating the voltaic light. Then, and not till then, will voltaic batteries be employed to the exclusion of every other means of generating force.

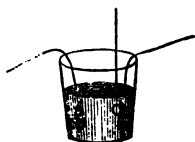
Although up to the present time I have not been able to use coke or carbon for a positive pole, I have succeeded in making a variety of circuits, in which substances composed of carbon and hydrogen form powerful voltaic circuits; for instance, sugar and nitric acid, oxalic acid and chloride of gold, ferrocyan

of potash and nitric acid, constitute examples of this class of batteries.

The voltaic circuit in animals is exactly balanced, and does not act without some impression to set in motion the electric current. The arterial or oxygenized corpuscles are admirably adapted for this purpose; and I have here an experiment which will illustrate their functions in a very beautiful manner. The glass vessel which I hold in my hand contains a solution of common salt, and two iron poles are inserted into it. Now, in this state everything is balanced, and no voltaic force is exhibited. If I take an artificial corpuscle made of animal membrane, containing a little per-nitrate of iron, and bring it in contact with one of the iron poles, a very powerful deflection of the galvanometer ensues, indicating the presence of a current. When, however, one corpuscle is placed against each plate of iron, the effect is again balanced, and no vol-

taic circuit arises. These experiments will indicate the functions of the blood corpuscle in the living body; for when one is in contact with each end of the nerve fibre, no current can take place, but the moment one is removed, or acted upon by heat, light, or other forces, a strong voltaic battery is formed.

FIG. 7.



Artificial blood corpuscle.

I would gladly have occupied your attention with a few remarks upon the relations of electricity to organic or cell-life. By a modification of the aggregation of cells, a plant produces leaves, stalks, flowers, or roots, which every gardener knows is, to a certain extent, as much under human control as digging, raking, or hoeing. During the prevalence of the potato malady, I subjected the plant to

every form of electricity, and in every possible manner, over long periods, without obtaining any result.

There is, however, one remarkable circumstance to be noticed with regard to the relation of electricity to cell-life; for I have found that electric currents stop the circulation of the blood, as suddenly as a stop does a watch when put down; and this entire stoppage of the circulation extends not only to the blood corpuscle, but also to the lymph corpuscle which creeps so slowly along the side of the vessel.

If we take a review of the functions of animal life, we find that all sensations, the registration of impressions, thought, action, and other phenomena of animal life, are voltaic effects, and solely obedient to physical laws; and to the idea of the performance of these functions we assign the idea of vitality. Life, therefore, is one word used to signify a num-

64 THE VOLTAIC MECHANISM OF MAN.

ber of changes. It is no independent real apart from the matter which exhibits the phenomena. Neither is it an impondera attached to matter ; nor is it an all-pervadi ether, or *anima mundi*, as some philosoph would have us suppose. Life, mind, memo reason, thought, come from organization, purely physical phenomena, and cease death.

Man, however, is immortal. Man, at times, and in all regions, has believed in immortality. Now, that which is mortal have no relation with that which gives to n his immortality. That which is infinite m not be limited ; time must not be confoun with eternity, matter with space, the b with the soul, nor material actions with Go

Electro-biology, then, leads us no less infer, than religion commands us to belie “that the dead shall be raised incorrupti and we shall be changed.”



J. B. Dods.

Engraved on Wood by Wm. Howland, N. Y.

THE PHILOSOPHY
OF
ELECTRICAL PSYCHOLOGY:

IN A COURSE OF
NINE LECTURES.

BY JOHN BOVEE DODS.

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DEDICATION.

TO B. B. WILLIAMS, M. D.

DEAR SIR—Deeply sensible of your nobility, and your sterling integrity and honor as a man, and sensible that the science of ELECTRICAL PSYCHOLOGY is dear to your heart—that you have honored it, and done much to establish it among mankind—and having so often and deeply felt your friendship, I claim the favor, as an expression of my confidence in your goodness, to dedicate to you this little work. You will perceive, that I have intentionally written it in rather a fanciful style, so as to make it pleasing to readers in general; and surely you, as a critic, will overlook this, as I have also endeavored to please the scholar, by throwing out before him a fair specimen of original thought. As such, it is most respectfully inscribed to you, by your sincere friend,

THE AUTHOR.

CONTENTS.

| | |
|-------------------------|-------------|
| DEDICATION, | PAGES. 3 |
| INTRODUCTION, | 9-13 |

LECTURE I.

| | |
|---|-------|
| ELECTRICAL PSYCHOLOGY—ITS DEFINITION, AND IMPORTANCE IN CURING DISEASES, | 15-32 |
|---|-------|

Invitation by members of United States Senate to lecture on the Science of Electrical Psychology—Man should use his reason—His space is small, yet his power extends to other worlds—The greatness and majesty of Nature—Her mysterious operations—Man a progressive being—Author's reference to his Mesmeric Lectures—Has for twenty years argued electricity to be the connecting link between mind and matter—Letter from Hon. Richard D. Davis, with editorial remarks on the mysterious nature of the experiments—Hiram Bostwick, Esq., cured of palsy—Two girls cured of deafness—Lady restored to speech and sight—Editorial advice to physicians to learn this Science—Resolutions of Dr. Dods' class of forty-five persons in favor of this Science—A lady cured who had not walked for eighteen years—Distinction between Mesmerism and Electrical Psychology.

LECTURE II.

| | |
|---|-------|
| BEAUTY OF INDEPENDENT THOUGHT AND FEAR- LESS EXPRESSION, | 33-48 |
|---|-------|

Electrical Psychology has claims to philosophy—Its strangeness awakens the deepest feelings of contempt among skeptics—Those who scoff and sneer have received their ideas by inheritance, without labor, as they did their estate—Such, though learned, are the greatest enemies of science—The march of intellect—Improvements of the day—The chariot of science commenced its career at the morning of creation, with but few on board, and will continue to roll on without end—Its passengers here are mortals; in eternity, immortals—The variety and richness of the intellectual and moral field—Use of the school and college—Divines should not fear science—It cannot destroy the Bible—Creation successive—Its vastness—All sciences have been opposed, and their discoverers persecuted—Harvey—Galileo—Newton—Fulton—Gall—Spurzheim—Combe—The Fowlers, of New York—Men should seek for true fame, and not a momentary popularity—True fame defined—A specimen of it in the example of Christ.

LECTURE III.

CONNECTING LINK BETWEEN MIND AND MATTER,
AND CIRCULATION OF THE BLOOD, 41

Let not opposition surprise—The characters from whom it comes are pointed out—Immutability of truth—It cannot be affected by the belief or unbelief of men—Electrical theory of the universe—Electricity eternal—The agent employed by the Creator to move globes and carry on the operations of nature—It is a universal agent, and the cause of light, heat, vegetation, twilight, evaporation, storms, earthquakes, and hurricanes—Man an epitome of the universe—All substances in him—Mind has both voluntary and involuntary powers—Brain is the fountain of the nervous system—Mind the cause of all motion, and can touch nothing but electricity—From mind to dead matter is seven links—Mind holds its royal throne in the brain, and executes its commands through electricity, its prime minister—Circulation of the blood—Its philosophy is new—Heart, with its ventricles and auricles—Why nerves attend the arteries and not the veins—How the brain is supplied with electricity—Why arterial blood is cherry-red, and venous blood purple.

LECTURE IV.

PHILOSOPHY OF DISEASE AND NERVOUS FORCE, 61

Circulation of the blood concluded—Circulating system is two systems—Arterial blood is *positive*, venous blood is *negative*—The notion refuted that the heart circulates the blood and exerts a force of 100,000 pounds—The heart is moved by the involuntary force of the cerebellum—The blood is moved by the *positive* and *negative* forces of electricity taken in at the lungs by inspiration—Philosophy of disease—One cause only for all diseases—Diseases do not originate in the blood, but in the electricity of the nerves—They begin in the finest invisible substance in the body and end in the grossest—All convulsions in nature begin and end thus—Blood not rendered impure by foreign substances carried into it, but by being thrown out of balance in its circulation—Diseases caused by mental or physical impressions—Disease settles upon the weakest organ or part of the body—Nervous fluid thrown out of balance is disease, and when equalized is health—Half of the nervous fluid is under the voluntary control of the mind—The other half is not

LECTURE V.

CURE OF DISEASE AND BEING ACCLIMATED, . . 82

Philosophy of disease—Mental and physical impressions—Rationale of its cure—Man riding—Head aches—Meets a robber—Headache cured—The healing principle is in us, not in medicine—Equalize circulation by nervous force—Emetics do not

PAGES.

possess the vomiting principle—Vomiting is produced by nervous force—Examples and proof—Diseases cured by mental impressions, even though caused by physical impression—Medicines produce physical results—Example of a peach-tree—Physicians should state to the patients what medicines they administer—How to preserve health—Bathings—No disease cured by an apposite—Philosophy of becoming acclimated—Mineral and vegetable kingdoms—Man a vegetable of second growth—All vegetables and animals adapted to their climates—Foreign substances should not be eaten—Change of our flesh and bones—Clothing adapted to climate—God has not erred in disposing the vegetable substances over the globe—Truth immutable.

LECTURE VI.

EXISTENCE OF DEITY PROVED FROM MOTION, . 99-118

Reason fearless of consequences—The power of electricity—Its awful manifestations—Nothing compared with Deity—Spirit supposed to be immaterial, but is not—Supposed to be the result of mechanism, but is not—Dr. Priestly—Atheists—The resurrection—Spirit is a substance—Electricity is universal—Mind is the opposite of dead matter—Body and nature compared—Each organ has but one function—The chain of elementary substances considered, from the heaviest up to the lightest—Only one substance has motion, this is mind—The unseen is the reality, the visible is not—The tree is an outshoot from the invisible life of the seed—All powers are in the unseen substances—Earthquakes—Man and nature alike—Involuntary powers of mind—Involuntary powers of God—His voluntary powers create—His involuntary govern through established laws—God's voluntary powers cannot be thwarted, his involuntary can—First human pair—Difference between being born and created—The acorn and the oak, which was first—Geology—Creation and government of the globe—Premature deaths argued—Two brains—Voluntary and involuntary powers—The office of each proved by preparing food and eating it.

LECTURE VII.

SUBJECT OF CREATION CONSIDERED, . . . 119-135

All motion originates in mind—Thought is not mind—Creation is a vast subject—Man's right to reason on any subject—Worlds made out of electricity—Nothing cannot be made into something—Apostle Paul—Bible sense of *create*—Something must be eternal—God, space, and duration considered—Philosophical necessity—Electricity is the body of God—Each animated body is an outshoot from mind—God's mind is not omnipresent, his body is—Mind is form—The serpent—The lobster—All feeling in mind—Amputations—How mind moves the body—

One hundred elements—Mode of creation—Gradually from the invisible to the visible forms—Boyle—Bishop Watson—Requires electricity, out of which the globe was made, to govern it—One hundred cords fastened on one hundred elements in electricity—Positive and negative forces—Ultimates and primates—Gold and phosphate of lime—Sun is electricity—Philosophy of twilight—The globe not yet finished—Newton—Comets—Elliptical orbits—Volcanoes—Philosophy of variation of the compass—The globe yet in its embryo—When finished—What future generations will say of us.

LECTURE VIII.

DOCTRINE OF IMPRESSIONS, 136-

Creation and Electrical Psychology—All substances in man—It requires electricity, out of which he was made, to govern him—Philosophy of digestion—Chyle, serum, blood, flesh, tendons, bones—Positive and negative forces—Blood the universal solvent of the body as water is of the globe—The brain—Stomach—One hundred elements—Law of equilibrium—Nature like man is thrown out of balance and becomes sick—Hurricane and tornado—Rheumatisms and broken bones preceding a storm—Thunder storms—Cause of hail—Earthquakes—Earth may have a bowel complaint—Volcanoes—Eruptions—Nature is cured by her own impressions, and so is man—Sleeping in unhealthy climates—Keep positive to surrounding impressions—Citizens of Charleston, S.C.—Country fever—Dr. Mason Good—Fear—Cholera—Salem witchcraft—Pleading guilty—Danger of executing persons on their own confessions—Judges and jurors.

LECTURE IX.

CONNECTION BETWEEN THE VOLUNTARY AND INVOLUNTARY NERVES, 152-

Electricity the connecting link between mind and inert matter—Goose pimples on the arm—Insulated stool—Nerves are magnetic—Electrometer—Why mind removes warts, king's-evil, or tumors—Dr. Warren, of Boston—Electro-nervous fluid heals—Why it heals—The voluntary and involuntary powers—Throne of the mind—Each person has two distinct brains through which the mind acts—Connection between the voluntary and involuntary nerves—How one may affect the other—Death occasioned by the want of sleep—Death is the sleep of the involuntary powers—Suspended animation in alligators, toads, serpents, raccoons, etc.—Suspended animation in some human beings for several days—Its philosophy or cause—Danger of premature interments—A man in New Jersey, his case stated—The circulating and nervous systems compared—The mind's throne in the medulla oblongata—Philosophy of natural sleep—Conclusion—Poetry on Hope.

INTRODUCTION.

THE author received the following invitation from the undersigned honorable gentlemen, members of the United States Senate, to lecture in Washington city, District of Columbia :

“ WASHINGTON, Feb. 12th, 1850.

“ TO DR. DODS :

“ DEAR SIR—Having received highly favorable accounts of the addresses delivered by you, in different sections of the Union, on ‘Electrical Psychology,’ a department of science said to treat of the philosophy of disease, and the reciprocal action of *mind* and *matter* upon each other, we would be gratified if you would deliver a lecture on the subject in this city, at the earliest time consistent with your convenience. With a view to the accommodation of members of Congress and the community generally, the Hall of Representatives, if it can be procured, would be a suitable place for the delivery of your discourse.

“ Yours, truly,

“ GEO. W. JONES, THO. J. RUSK,

“ JOHN P. HALE, SAM HOUSTON,

“ H. CLAY, H. S. FOOTE,

“ DAN. WEBSTER.”

To the above the following answer was returned :

"To the Hon. Tho. J. Rusk, Sam Houston, H. Foote, Geo. W. Jones, John P. Hale, Henry Cla and Daniel Webster, all of the United States Senat

"GENTLEMEN :

"In reply to yours of Feb. 12th, I would respectfully say, that I feel myself highly honored to receive an invitation from you, to lecture upon the philosophy of Electrical Psychology in the United States Capitol. With this invitation I comply, and it affords me much pleasure to do so. Owing, however, to circumstances and previous engagements, my earliest and only trip during my present visit in Washington, will be on Saturday evening, Feb. 16th. I will therefore appoint that time as most suitable to my convenience, and commence my lecture at half-past seven o'clock.

"With sentiments of high consideration, I am

"Yours, truly,

"J. B. Dods."

It was the intention of Dr. B. B. Williams, of North Carolina, to publish, in 1850, a large work, embracing at least 500 pages octavo, on the science of Electrical Psychology. For the present the work will not appear but I sincerely hope that he has not abandoned the idea of so grand an enterprise. The public will expect and have for some time been anxiously looking for appearance. This little work may be considered

precursor, and would not have made its appearance, but for the following reasons :

1. Dr. Williams, Dr. T. Fiske, of Pennsylvania, and myself, have taught this science to hundreds of individuals ; and many of these, understanding it so far as to experiment and apply it to disease, have gone out into the field as public lecturers, and not possessing the advantages of a suitable education, have on this account unintentionally misrepresented our views, and thus innocently done this science a serious injury. These have again partially taught it to others, who have in their turn also entered the field as lecturers, who know nothing of the great principles of this science. These Lectures are intended to correct public opinion, and to serve as a GUIDE to public lecturers.

2. Some have supposed, and even published, that the secret could be told to any one in a moment, and that this was all that was necessary to qualify any one to practice this science—to experiment and lecture upon it! Hence, to purchase a pamphlet purporting to come from some “*Professor of the Science*,” and containing a mere tissue of nonsense, mixed up with stolen quotations from my “*Lectures on Mesmerism*,” is urged to be all-sufficient, and that it will save the purchaser several dollars for tuition. The printer and vender of such an anonymous publication are liable to a prosecution from Fowlers and Wells, for trespassing upon their copy-right. The publication of these Lec-

tures will satisfy the community that this science cannot be faithfully taught but by a workman, and that it requires something more than a mere secret, and even more than is explained in this little work.

3. My third and last reason for publishing these Lectures is, the constant and urgent request of my friends to do so, because the public voice calls for something of this nature. And having been assured that some of my pupils are intending to answer this call by publishing something upon this science, and as a student of divinity has most unjustly published a miserable and garbled catch-penny report of my views, in Utica, N. Y., I have consented to gratify my friends, and the public at large, by writing out in full the substance of my Lecture delivered in Washington city, and publishing it, in the form of nine short Lectures, to the world.

Dr. Williams was formerly my copartner as a lecturer, and my coadjutor in the discovery and perfecting of the philosophy of this science, and in applying to it the name of ELECTRICAL PSYCHOLOGY. Its philosophy has cost me seven years of intense study. Some contend, that it is, after all, but Mesmerism. If this be so, it is certainly the perfection and absolute sublime of Mesmerism. If there is an individual in existence who has taken persons from a public audience, who had never been mesmerized nor operated upon, and immediately controlled them in their *muscular motions* and mental impressions, till it was done

by Dr. Williams and myself, I am ignorant of the fact. It would only prove, that two have thought alike in relation to the same experiments. Such experiments I have never seen advertised for public exhibition, nor have I ever read them in published works. I am well aware, that persons who have been mesmerized have been experimented upon in a wakeful state. This I have done myself in hundreds of instances, since 1840, and seen it done by others. But this is not Electrical Psychology, and does not reach the point above stated. With these remarks, I submit the following work to the public, sincerely hoping that it may, with all its imperfections, be the means of doing much good to the human race.

J. B. D.

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ELECTRICAL PSYCHOLOGY.

LECTURE I.


LADIES AND GENTLEMEN :

I HAVE received an invitation from several EMINENT MEMBERS of the United States Senate, to deliver a Lecture on the Science of Electrical Psychology—the philosophy of disease—the connecting link between *mind* and *matter*—their reciprocal action upon each other, and the grand operations of nature that this science may involve. In compliance with this invitation, I now stand before you for this purpose, and will endeavor faithfully to discharge my duty. In order to do my subject justice, I shall be under the necessity of making a very liberal draft on your time and patience. Sensible that I stand here by the invitation of those distinguished orators, statesmen, and generals, whose eloquence, in defence of LIBERTY, has been felt by thrones—whose wisdom has given laws that are respected by *all nations* on earth, and make millions of

freemen happy—and whose heroism has breasted the battle storm in defence of human rights—it may well be expected that I should, in some measure at least feel the embarrassment that the occasion itself must naturally inspire.

As the Creator of the universe has endowed man with reason, and assigned him a noble and intelligent rank in the scale of intellectual and moral being—and as he has commanded him to use this faculty—so may with justice remark, that he who *cannot reason* is a fool ; he who *dare not reason*, is a coward ; he who *will not reason*, is a bigot ; but he who *can* and *dare reason*, is a MAN.

The realms of nature lie open in boundless prospect above, beneath, and around us. As inhabitants of this globe, we occupy but a small spot—the centre, as it were, of the immense universe that swarms with countless variety of animated beings, and contains endless sources of mental and moral delights. Order, harmony, and beauty are so perfectly woven together and blended throughout NATURE, as to form the magnificent ROBE she wears, and with which she not only charms and even dazzles the eyes of the beholder, but conceals the overwhelming power and majesty of her PERSON. As she moves, the most grand and awful impressions mark her footsteps on the globe's surface or centre—in air or ocean. She smiles in the gentleness of the calm, and frowns in the fury of the storm



But whether silence reigns, earthquakes rumble, or thunders roll, she keeps her mighty course unaffected by the revolutions of ages.

At the same time that there is confessedly something most grand in the operations of nature, and even while the most gifted minds are reveling with delight amidst her magnificence, and feasting upon her splendors, there is still something humiliating in the thought, that incomprehensibility continues to hold its dark and sullen empire over the causes of many of her most sublime manifestations. For a period of twice three thousand years, she has concealed beneath the shadow of her hand, not only the cause of worlds rolling in their ceaseless course through the illimitable fields of space, but also the rise and fall of vegetation, and the phenomena of life and death.

— Man is intellectually a progressive being. Though confined to a narrow circumference of space, and chained to this earth, which is but a small part of the unbounded universe, yet as his mind wears the stamp of original greatness, he is nevertheless capable of extending his researches far beyond the boundaries of this globe. His mind is capable of a ceaseless development of its powers. From the faint glimmerings of infantile reason, he passes on to that intellectual strength and grandeur when he can take a survey of the planets, the dimensions of the sun, trace the comet in its erratic course, analyze the works of God, and

comprehend the vast and complicated operations of his own mind. How sublime is the contemplation, that he can invade the territory of other worlds, bring them within field-view of the ken of his telescope, and see them play their aerial gambols under the superintendence of attraction and repulsion.

But before I proceed any further, it becomes necessary that I clearly state the subject of my present course of Lectures, so that we may enter upon it understandingly, and, if possible, with a clear conception of its nature and importance to the human race. The subject, upon which I am entering, is that to which I have given the name of Electrical Psychology, as the one which is, in my estimation, the most appropriate. PSYCHOLOGY is a compound of two Greek words, viz., *psuche*, which means *soul*, and *logos*, which means *word, discourse, or wisdom*. Hence by PSYCHOLOGY we are to understand the SCIENCE OF THE SOUL. And as all impressions are made upon the soul through the medium of electricity, as the only agent by which it holds communication with the external world, so you readily perceive not only the propriety but the entire aptitude of the name ELECTRICAL PSYCHOLOGY.

Twenty years ago, I discovered electricity to be the connecting link between mind and inert matter, and on this discovery the philosophy of the present science is based. Ever since 1830, I have contended, that *electricity is not only the connecting link between mind*

and *inert* MATTER, but is the grand agent employed by the Creator to move and govern the universe. These views, in opposition to the doctrine of inherent attraction in matter, I advocated in Taunton, Massachusetts, in two Lectures I delivered before the Lyceum in 1832. The substance of these is embodied in six Lectures I delivered at the MARLBORO CHAPEL, in Boston, January 1843, by request of members of both branches of the Massachusetts Legislature then in session in that city; and they have been most extensively published in this country, and republished in England. In that work they are applied to the philosophy of Mesmerism. I make these remarks so that ladies and gentlemen present on this occasion may know, that my views of the ELECTRICAL THEORY of the universe, and the CONNECTING LINK between mind and inert matter, are not the breathings of a momentary impulse, but of long and matured deliberation.

Electrical Psychology takes a most extensive range, and embraces a field rich in variety of thought. It is so startling to human credulity, that its truth cannot be believed, only by passing it through the ordeal of the severest scrutiny by oft-repeated experiments. As to the character and force of these experiments, I cannot better express them than in the following editorial notice from the "Saratoga Republican."

The editor of the Saratoga Republican having received a letter from the Hon. Richard D. Davis, for-

merly a member of Congress, in relation to this science writes as follows :

“ Dr. Dods, who professes to have discovered a new science, to which he applies the name of Electrical Psychology, is at present giving a series of remarkable experiments, in our village, by way of illustrating its truth and undoubted reality. By it he professes to be able to perform the most startling and cunning experiments, upon persons fully awake, and in the most perfect possession of all their faculties. Controlling their motions—standing up, they find it impossible to sit down; if in a sitting posture, they are unable to rise till the operator allows them to do so. He claims to have the power to take away the powers of hearing, speech, sight, and the memory, etc., whenever he pleases, and to return again these faculties instantly. That he can change the personal identity of certain individuals, making them imagine for the time being that they are persons of color, that they belong to the opposite sex, or that they are some renowned general, orator, statesman, or what-not. He professes to be able to change the appearance and taste of water in rapid succession to that of lemonade, honey, vinegar, molasses, wormwood, coffee, milk, brandy; the latter producing all the intoxicating effects of alcohol. He brings before his subjects the threatening thunder cloud. They see the lightnings flash and hear the thunders roll; the storm bursts over their heads, a

they flee to a place of shelter, under a table, bench, or any thing that offers protection. All this while the individuals experimented upon are perfectly awake and in possession of their reasoning faculties.

“We are well aware, that the first impression upon the mind of the reader will be, that all this is absurd, ridiculous, and utterly impossible. This would be the natural conclusion of every one who had never witnessed any of these surprising phenomena; but the reality of all this is maintained by some of the most respectable and talented men in the country. We have permission to refer to several individuals of the highest standing and character, who are believers in this science, and have been pupils of Dr. Dods. We have before us a letter written by Hon. RICHARD D. DAVIS, from which we make the following extract. Mr. Davis says :

“The science which Dr. Dods teaches, is to my mind alike novel, instructive, and useful—full of speculation fit for the loftiest intellect, and replete with rich instructions for every condition of human life. So far as I am able to judge, I can safely say, that no person of ordinary capacity and intelligence can take the usual course of lessons from the doctor, who will not at its end sincerely acknowledge himself more than tenfold repaid for its cost of time, trouble, and expense; and the more the ability and information of the individual may be, the more ready will be the acknowledgment. I am un-

willing to express more than half the gratification of instruction which I have received, and if my recommendation can prevail with any one to become his pupil, it is most cheerfully and earnestly given."

What I have now read in your hearing, will give you some idea of the nature of the experiments, and what claims Electrical Psychology has, in the opinion of distinguished men, in relation to its pretensions as science and usefulness. But there is no question, ladies and gentlemen, after admitting that these experiments are truly wonderful, and to them incomprehensible, will yet ask, of what use are they to the human race? The great usefulness and transcendent importance of this science to the human race consist in curative powers over those diseases that medicine cannot remove. As facts come home to men's bosoms and rebuke the skeptic in a voice of thunder, so I cannot give a better answer to the question, nor render a better service, than to read a few extracts from city papers of Auburn, New York, where I last lectured and experimented. It is as follows:

"HIRAM BOSTWICK, Esq., so long and so well known in this city [Auburn] and county, during more than years before he saw Dr. Dods, did not take a natural step. For a year and a half last past, could not slowly drag his feet along, as though they were attached to wooden legs, and, at that, did not attempt to go about the streets. Besides an attack

spring (which was the fifth stroke of palsy he had received), he could not even distinguish light from darkness, with his right eye. In a word, he was dead to happiness and usefulness. He met Dr. Dods, and in less than a week he was taking walks of a mile in length. With his right eye he distinguishes persons, and is constantly improving, while he is daily promenading our streets with the perfect control and use of every muscle, and is quite as happy as any man we meet."

I will read again from another Auburn paper. It is as follows :

"Do the dumb speak and the deaf hear? In Auburn, in October, 1849, they do. This forenoon, two girls went to the City Hall, neither of whom could hear a conversation in an ordinary tone. They were operated upon some five or six minutes each, upon the principles of Electrical Psychology as taught by Dr. Dods, and when they left, one of them could distinctly hear an ordinary conversation, and the other could as distinctly hear a whisper."

"Yesterday noon, a lady from Massachusetts called upon Dr. Dods, at the Western Exchange. Her eyelids were so drawn down over her eyes that she could not see, and she could not talk. In twenty minutes she could both see and converse. If any one discredits this statement, let him ask Gen. Wood, the gentlemanly proprietor of the Exchange. When this blind

and dumb lady came, her female attendant stated, Gen. Wood, that her friend had not opened her eyes for three years, and for the last year had not uttered a syllable. The afflicted lady made the same statement, after the doctor had restored her wonted power of speech. During the three years, she was for one them confined in a dark room, to avoid the supposed injurious effects of light. She could not raise the upper lids of the eyes.

“Such was her situation when she called upon Dods at the Exchange yesterday; and in half an hour she left again, drinking in with delight the prospect about her, and from which for years she had been tirely shut out, and while at the same time she poured forth her joy in words which it may be well imagined were those of the purest ecstasy. Her friends tried to prevail upon her, when she reached the carriage, to shield her eyes, lest the sudden change from darkness to glare should have a deleterious influence upon those sensitive and delicate organs; a gaze about the city was too rich a treat to be lost, and she availed herself of the opportunity to enjoy it.

“As this lady had been so long and so severely afflicted, had availed herself of the knowledge and experience afforded by the medical profession, and was at the present time traveling in search of health, I thought the case worthy of mention.

“Do not understand me to be one who, even if in his power, would do any thing to depreciate the high estimation in which the medical profession is so justly held. Not at all. I regard it as one of the noblest of all pursuits, and believe that its practitioners, as a class, are not excelled, if equaled, by any other in kindness, self-denial, and humanity. But I will say, that every physician ought to understand Dr. Dods’ system of Electrical Psychology. There is no room to doubt that it will not only give him a knowledge of laws and phenomena of the human economy he does not now know or comprehend, but will enable him to afford relief and restoration in cases where before it was out of his power.

“Granting this to be so—and the appeal here is to facts which cannot lie—what is the duty of the honest physician? Is it to sneer at a system or science which, with a respectable face, makes even these pretensions?—which professes to unfold laws and powers of mind and body which they do not understand, and backed up by actual, tangible results, which utterly dumbfound the whole of them? Is *sneering* his duty, when his hands hold the scales in which are deposited life and death? Is it not rather his duty to investigate the matter—to probe it to the bottom—to know all that can be known about it?

“The community will answer these questions, because they are deeply interested in the answer. In

this city, cures will be performed within one year, by the pupils of Dr. Dods, in cases where the present medical system has been exhausted in vain. This will test the question. And by this test, every physician who sneers at Electrical Psychology will be compelled to abide. From it he *cannot*, and *will not* escape. I will refer now to only one beauty of the electro-psychological treatment of pain and disease. Its pharmacy is always perfect—it is of God.”

From the extracts which I have now read in your hearing, from the Auburn papers, you will at once perceive the power and glory that hover around this science, and the importance which is claimed in its behalf as one of the greatest blessings ever vouchsafed to the human race. So that you may see the high estimation in which this science is held by the citizens of Auburn, generally, where these cures were performed, I will trouble my audience but once more, and ask their indulgence while I read the resolutions they unanimously passed in behalf of Electrical Psychology as a great and important science, which resolutions were published in the Auburn papers. I will also read the prefaced remarks of the editor. They are as follows :

“ELECTRICAL PSYCHOLOGY.—Dr. Dods closed his Lectures, in Auburn, on Saturday evening. It will be seen by our columns this afternoon, that the gentlemen composing his CLASS, availed themselves of the occa-

sion to express their views of Electrical Psychology, and of the manner in which the Doctor sustained his relations as their Instructor in his system. It is enough to say that the CLASS numbered gentlemen of undoubted intelligence."

"Proceedings adopted by the Auburn Psychological Class.

"At a meeting of the CLASS of forty-five persons, who had taken private lessons of Dr. J. B. Dods in the science of Electrical Psychology, held at the City Hall, in the city of Auburn, on the 27th day of October, 1849, John P. Hulbert was called to the chair, and Dr. S. N. Smith appointed secretary.

"On motion, a committee of three was appointed by the chairman to draft and report to the meeting resolutions expressive of the views and feelings of Dr. Dods' pupils, in the city of Auburn, in respect to the lessons and lectures given them by him."

"On motion, the chairman and secretary were added to the committee.

"The committee reported the following resolutions, which were unanimously adopted by the meeting.

"Resolved, That the science of ELECTRICAL PSYCHOLOGY, as taught to this class, by Dr. J. B. Dods, in a series of private instructions and lectures, we believe to be founded in IMMUTABLE TRUTH, and that it

will accomplish for the human race an inappreciable amount of good.

“Resolved, That we believe **ELECTRICAL PSYCHOLOGY** has been, and will be eminently useful in alleviating the pains of the suffering, and in the cure of diseases; that it is as comprehensive as it is beautiful and beneficent; and that it is not only eminently calculated to enlarge and elevate the mind, but to impress upon it more exalted ideas of the infinite wisdom and goodness of the **DEITY**.

“Resolved, That we tender to Dr. Dods our thanks for the courteous and gentlemanly manner in which he has discharged his duties to us as his pupils. That he has, in all respects, redeemed every pledge or assurance that he gave us when we became his pupils and that in parting from him we give him our warmest wishes for his prosperity and happiness.

“On motion, resolved, That the proceedings of this meeting be signed by the chairman and secretary, and delivered to Dr. Dods, and that they be published in the newspapers of the city.

“**JOHN P. HULBERT**, Chairman.

“**S. N. SMITH**, Secretary.”

The subject of these Lectures is now fairly open before us. I have explained what I mean by the term **ELECTRICAL PSYCHOLOGY**, and why I saw fit to give the science this name. The wonderful and startling

phenomena that hover around it, like so many invisible angels, and which are made manifest in the experiments produced, I have also candidly stated. They consist in the fact, that one human being can, through a certain nervous influence, obtain and exercise a power over another, so as to perfectly control his voluntary motions and muscular force; and also produce various impressions on his mind, however extravagant, ludicrous, or wild—and that too while he is in a perfectly wakeful state. I have stated, that it is one of the most powerful remedial agents to alleviate the pains of the suffering, and to cure those diseases that set the power of medicine, and the skill of the ablest practitioner, at defiance. And from the published newspaper articles, letters, and resolutions of most highly reputable, and even distinguished men, which I have just read in your hearing, you can form an opinion of the effects produced, of the cures performed, of the high estimation in which this science is held by those who have acquainted themselves with its secret powers, and of their high estimate of its incalculable importance to the human race, and the future amount of good it is ultimately destined to achieve.

I have only read to you the testimony of the citizens of Auburn, but could produce the testimony of thousands more, from the various portions of the United States where I have lectured—of the importance of this science in the cure of diseases; and those, too, of

a more startling character than any I have named. It can produce the testimony of hundreds, that this science has, in fifty minutes, restored to Lucy Ann Allen of Lynchburg, Virginia, the use of her limbs; who had not walked a step in eighteen years, nor had she even been able to raise herself up from her pillow so as to sit in her bed for more than fourteen years. Such is the nature and intrinsic grandeur of this SCIENCE such are the experiments and facts connected with it such are its results that stamp it with the high impress of its sterling importance to mankind; and such are its lofty end and aim; and as such it must stand when the pillars of strength and beauty that support our Capitol shall fall and be crumbled to dust.

Some have the impression, that Electrical Psychology is, after all, but Mesmerism. In answer to such I would say, that there is a very marked difference between the two sciences, and this difference is easily pointed out. MESMERISM is the doctrine of *sympathy*; ELECTRICAL PSYCHOLOGY is the doctrine of IMPRESSION. In Mesmerism there is a sympathy so perfect between the magnetizer and subject, that what he sees, the subject sees—what he hears, the subject hears—what he feels, the subject feels—what he tastes, the subject tastes—and what he smells, the subject also smells and lastly, what the magnetizer wills, is likewise the will of his subject. But the person in the elect

psychological state has no such sympathies with his operator. His *sight, hearing, feeling, taste, and smell* are entirely independent of the operator, and he continually exerts his will against him, and resists him with all his muscular force. The person who is aroused from the mesmeric slumber, has no remembrance of what transpired in it; while the person in the electro-psychological state, is a witness of his own actions, and knows all that transpired. The person in the mesmeric state can hear no voice but that of his magnetizer, or the voices of those with whom he is put in communication. But the person in the electro-psychological state, can hear and converse with all as usual.

If these distinctions are not sufficiently marked to settle the points of difference, then I will mention two more. I have found persons entirely and naturally in the electro-psychological state, who never could be mesmerized at all, nor in the least affected, under repeated trials. The other point is, that no person is naturally in the mesmeric state, but thousands are naturally in the electro-psychological state, and live and die in it. MESMERISM and SOMNAMBULISM are *identical*; they are one and the same state. And as no person is naturally in the somnambulic state, so no one is naturally in the mesmeric state. Though the experiments of both these states are performed by the same nervous fluid, yet this does not render the two

sciences identical, any more than that they are rendered identical with fits, or insanity, which are caused by the same nervous force. These observations being sufficient for my purpose, are respectfully submitted to you for your candid consideration.

LECTURE II.

LADIES AND GENTLEMEN :

As the subject of Electrical Psychology is now fairly introduced, its phenomena stated, and its importance to the human race clearly pointed out, we are now prepared to enter the diversified fields of nature ; to glance at the operations of mental and material existences ; and to proceed understandingly to the consideration of its claims to PHILOSOPHY, as the foundation on which it rests, and the power by which its existence must be sustained. But as I am fully sensible that such strange facts as I have stated are most trying to human credulity—sensible that they are calculated to awaken the deepest feelings of contempt in the bosoms of the skeptical, and to draw forth the sneers of mankind—so I must be indulged to speak, in the first place, of the march of science, the beauty of the independent expression of our thoughts, and to notice the fate of the opponents of science in all ages of the world.

Entering, as I do, upon a theme entirely new, I am by no means insensible of the embarrassments that

surround me. Were I called to address you upon any other subject than that of ELECTRICAL PSYCHOLOGY, I should stand before you with other feelings than those that now pervade my breast. It is by no means an enviable task to step aside from the long beaten path of science into the unexplored and trackless regions of solitude and silence. By so doing, and daring to think for myself, I am well aware that I assume no very enviable position as it regards popularity. Independent thought and fearless expression have ever drawn forth the scoffs and sneers of that portion of our race who have adopted, without investigation, the scientific opinions of others. I refer to those only who have received their ideas from others by inheritance, as they did their real estate. For the one they never labored, and for the other they never thought.

Such persons, though professing to be learned, and perchance even claiming to be the guardians of science, are nevertheless its greatest enemies ; and by exerting their influence in favor of old opinions, however absurd, and against any innovations, however true, useful, or grand, are checking the mighty march of mind. They are clogs of more than leaden weight hanging upon the chariot wheels of science that are rolling through our world. It commenced its career at the breaking morn of creation, with but few passengers on board, and has continued its course with increasing speed and growing glory down to the present moment. It now travels

with the brilliancy and rapidity of the lightning's blaze, and even compels the very lightnings to speak in a familiar voice to man! Yes; they even write, not only their forked gambols on the bosom of the dark cloud, but they write on paper, and transmit human thought as swift as thought can move.

The chariot of science is destined to continue its majestic course, in duration coeval with our globe! Still more! it is destined to outlive the dark and sullen catastrophe of worlds! The chariot of science, with ever increasing power, magnificence, and glory, is destined to pass the boundaries of the mouldering tomb—to snatch immortality from the iron grasp of death, and roll on in living grandeur through the eternal world, gathering new accessions of intellectual beauty and unending delight. Its passengers here are mortal men. There they will be angel, archangel, cherubim, seraphim, and the glorified millions of our race! The mind of man wears the impression of divinity, the stamp of original greatness; and is destined to ripen in mental vigor as the wasteless ages of ETERNITY roll. Hence the very principles of our nature as an impression from the hand of God, forbid us to stand still. Their command is ONWARD.

If no human being had dared to hazard the expression of an original thought, then nothing in the realms of science would have been disclosed by speech, nor penned in books. A dreary, barren waste, wrapped

in solitude and night, would have reigned for human contemplation. But instead of this frightful picture of desolation, we see those fruitful fields of mental and moral beauty, so rich in the scenery of thought, and in endless variety, present themselves to our view. A secret rapture of thrilling delight fills the heart as we glance over this lovely scene, on which human research has thrown a splendor surpassing that of the noontide blaze.

Had not some master spirits dared to freely speak and write their thoughts, then those pretended friends of science, who now oppose every thing that may appear to them both new and strange, would have been destitute of that knowledge they obtained from books and not daring to think for themselves, they would have remained in mental night. It is by daring to step aside from the beaten track of books, and bringing forth from the dark arcana of nature into the light of day some new truth, that we add our mite to the common stock of knowledge already accumulated. He who denies us this grand right of our nature is a scientific bigot, and has yet to learn, that even the school and college were only established to discipline the mind for action. There the student, through books and instructors, is only made to see how other men have dared to think and speak, and write, and thus his mind, being made to feel its innate freedom, power, and greatness, becomes inspired with a self-determination to do the

same. This makes the MAN, and answers the lofty end of human existence. On the other hand, he who goes through life, leaning entirely upon books and the opinions of others, without thinking for himself, renders his present existence a blank, inasmuch as he lays his head in the dust, without its having bequeathed one original thought to the world, for the benefit of after generations.


The truths that God has established inherent in nature, are not only infinitely diversified, but are at the same time immutable and eternal. No possible addition can be made to their number, nor is it in the power of man to create or annihilate a single truth in the EMPIRE OF NATURE. They exist independent of his *belief or unbelief*; and all he can do is to search them out, and bring them forth from darkness into the light of day. And he who has the magnanimity to do this, so far from being opposed and persecuted, should be sustained and encouraged as the benefactor of his race.

The Creator of the universe is the Author and Proprietor of the great volumes of nature and revelation. Hence divines, at least those who are men of letters, should not start at any new scientific revelations, and exclaim, "If this be true we must give up our Bibles!" As men of science, they have nothing to fear from new discoveries in the shoreless ocean of truth. The volumes of NATURE and REVELATION both claim the same perfect Author, who had every thing open and naked

to his omniscient inspection, and exercised infinite wisdom in producing and establishing the order and harmony of the universe.

Though this globe, and perhaps the whole of our planetary system, was finished six thousand years ago, yet we have no reason to suppose that this was the first effort of his creating energy. We are floating in an immensity of space that knows no bounds, like the mote in the sunbeam. This is peopled with rolling worlds, in number beyond an angel's computation. And the residue, which has not yet become the abode of light, life, order, and beauty, is filled up with matter still in its uncreated state. Hence the work of creation has been going on from eternity, and will continue to progress, so long as the throne of the self-existent Jehovah endures, without ever arriving at an end in the sublime career of creation! New brother creations are every moment rolling from his omnific hand and that creating fiat will never, never cease.

These ideas of the wonder-working Jehovah, from whose all-forming hand worlds and systems of world are continually rolling, and have been, for millions of millions of ages, force upon us those amazing conceptions of the oppressive grandeur of his works under which the mind labors and struggles in its contemplations, but is borne down, and lost and bewildered in the immensity of the theme. ORDER, VARIETY, AND BEAUTY, in endless succession, meet us on every hand



All this has been accomplished by the Infinite Mind, through electrical action, and bespeaks the vastness and sublimity of the subject. It is the science of the living mind, its silent, mysterious workings, and energetic powers. It is a science that involves the majestic movement of rolling worlds, the falling leaf, and claims the GREAT LAW of the universe as its own. The vastness, as well as the transcendent importance of the subject, clearly evince that it is worthy to be embraced by every independent, noble, and generous mind. You will pardon me, Ladies and Gentlemen, for having, by a momentary digression from the present chain of my subject, anticipated a few ideas in relation to the creation and its vastness. These more properly belong to a future Lecture, when I shall come to show what connection this science has with the universe—with rolling worlds—yes, with a falling leaf. The fall of a single leaf is a catastrophe as dreadful to the thousands of inhabitants of its surface as the destruction of this globe would be to us. And the blotting out of our globe from the catalogue of worlds, would no more be missed amid the immensity of creation than the fall of a leaf compared to the sublime magnificence of the countless forests on this globe. From this digression I return to my subject.

That Electrical Psychology should meet with opposition from men of a peculiar constitution of mind, and a certain degree of scientific attainments, is nothing

strange. Nor is it at all miraculous, that a few who are deemed men of talents, should oppose, and even deride it as a humbug. But as GENIUS is supremely higher than TALENTS, so I boldly and safely make the declaration that no man of GENIUS has ever opposed Electrical Psychology; nor in any age of the world has GENIUS ever been enlisted in opposing the dawning light of any of the sciences that have arisen on earth from the morning of creation to the present day. But as before remarked, that this science should meet with opposition from that class of scientific men, who always stand watching the direction in which the breeze of popularity may chance to blow with the strongest force, and who are anxious, through these means, to bring themselves into notice, and thus gain a momentary fame from the passing crowd, is nothing strange. It only proves the fact that ELECTRICAL PSYCHOLOGY is, in the infancy of its being, destined to share the fate of all great and useful sciences, that now stand unshaken in the republic of letters. All, in their infancy, received from such men a like opposition, and upon their founders they freely breathed out their derision, scorn, and sneers.

Harvey discovered the CIRCULATION of the blood, and disclosed it to the world. He was opposed and derided, and much of that *talent, learning, and cunning* we have referred to, was enlisted against him. They sought to paralyze the towering wing of his

GENIUS; to blast his reputation; to wither the fairest flowers of his domestic love, hope, and joy; and to hurl his brilliant discovery from the light of day to the darkness of night. But Harvey's name stands immortal on the records of true fame, and the blood still continues to frolic in crimson streams through its living channels, while his learned opposers are forgotten. Galileo discovered the rotation of this globe on its axis. So great was the opposition of the learned powers combined against him, that they arraigned him and his theory at the august and awful bar of humbug. There they fairly tried him and his discovery under the splendid and majestic witnesses of *derision*, *sneer*, and *scorn*; and the court very gravely decided, that his discovery was a heresy, and that he must openly acknowledge it to be so to the world. To this sentence he submitted—acknowledged his theory to be a heresy, but remarked, that he nevertheless believed it true. Galileo lives in the bright page of history. That sentence did not arrest the globe in its mighty course. It still continues to roll on its axis as he discovered and proclaimed, while the learned opposers of his theory, who courted popular favor at the expense of honor, are sunk into merited oblivion.

NEWTON'S GENIUS, when he was but a boy, intuitively drove him to study *gravitation* by piling up small heaps of sand, and to notice more strictly this power in the falling apple. It drove him to study

adhesion by watching the union of the particled water at the side of some favorite stream ; and to perfect this science he is next at the centre of the globe. From gathering pebbles in boyish sport on the ocean shore, he is next among the stars, and at length proclaims to the world his system of PHILOSOPHY and ASTRONOMY. He was derided and mocked as a silly headed fool, and his whole magnificent system was spurned with sneering contempt and pronounced humbug by the old school of philosophers and astronomers. But substances continue to respect the law of *gravitation*, and rolling worlds to obey the law of *attraction* and *repulsion*. NEWTON lives in the brightest blaze of fame ; for his name is written in starry coronals on the deep bosom of night, and from thence is reflected to the centre of the globe ; while the opposers of his magnificent discovery are sunk in the shades of unremembered nothingness. The clouds and mists of their own evanescent fame have become their winding sheet.

Fulton was derided, and even men of science pointed at him the finger of indignant scorn, because he declared that steam—a light and bland vapor, which could be blown away by human breath—could move an engine of tremendous power, and propel vessels of thousands of tons burthen against wind and waves and tides. They declared it to be the greatest of humbug and the most silly idea that ever entered a silly brain.

or else the trick of a knave to make men invest capital in order to effect their ruin. His friends, even though not over-sanguine of success, yet defended him as a man of honor. But FULTON "stood firm amidst the varying tides of party like the rock far from land, that lifts its majestic head above the waves, and remains unshaken by the storms that agitate the ocean." So stern was the opposition, that some of the committed skeptics, who sailed from New York to Albany in the steamboat that first tried the experiment, declared, that it was *impossible* they had been conveyed a distance of one hundred and fifty miles by steam power ' and that it must, after all, have been some power aside from steam, by which they had been enabled to reach Albany! The impression of FULTON'S GENIUS is seen on all the machinery moved in our happy country by this subtile power. It is seen in railroad and steamboat communications, that bring the distant portions of the United States in conjunction. It is seen in the majestic STEAMSHIPS of England, that bring her and the transatlantic world into neighborhood with us, by a power that triumphs over all the stormy elements of nature. FULTON, as a man of GENIUS, is remembered as one of the great men of the universe, while his opposers are silent and forgotten.

Thus far, I have spoken of the physical and mechanical sciences only, involving the chemical properties of material substances, and the general operations

of nature. I now come to those that relate to the improvement of the mind. I come still nearer home. The science of PHRENOLOGY, so beautiful, elevating and useful in its nature, and having so strong a bearing upon the character and destiny of man, as an intellectual, social, and moral being, and even involving the dearest interest of our race—has been, and by some still is, most shamefully abused. GALL, its discoverer, was persecuted; and SPURZHEIM, COMBE, and FOWLER have received unmerited abuse. The two Fowlers, of New York, have for years withstood the storm of opposition. Thus far, they have most successfully met and repulsed the assaults of men—the victory—gathered new accessions of strength, and still hold the field. They are business men, who never slumber at the post of duty. They have made new discoveries and improvements; gathered an immense variety of cabinet specimens of skulls and busts, from the idiot up to the most brilliant intellect—from the cold-blooded murderer up to the melting soul of a benevolent and philanthropic Howard. They have made a righteous development of true character in the phrenological examinations of thousands of human heads have directed the anxious parent how to train up the child of his affections; have pointed out to the sighing lover how to choose a congenial spirit of companionship for life; and have poured the light of mental and moral improvement in silvery streams on the GRAND EMPIRE

OF MIND. Yet such a science as this has been called a *humbug*! and such men as these have been assailed. Their bones are worthy to repose with the great men of the universe, and their names shall live on the bright scroll of fame down to the last vibrating pendulum of time—shall live when the opposers of phrenological science shall have sunk from human remembrance.

Such has been the fate of all sciences in the infancy of their existence. The moment they were born into life, the battle-axe was raised against them, and each in succession has fought its way up to manhood. The victory in favor of truth has always been sure, and millions of sycophants in the contest have perished.

How lamentable is the consideration, that there are those in this day of light, who, regardless of the warning voice of past generations, coming up from ten thousand graves, still shut their ears and close their eyes—and even sacrifice principle, to keep popular with those on whom they depend for a momentary fame. But they are not the men whose names will stand imperishable in the annals of history, to be handed down to future generations. They are destined to perish from human remembrance, and not a trace of them be left on earth.

I would not be understood as dissuading you from the pursuit of true fame. I do not despise its noble glory; but am fully sensible, that of all characters ever

formed and sustained by human beings, that of true fame stands unrivaled and supreme on the page of history.

Though man is mortal, and his present existence ephemeral, yet during the short span of three-score years and ten, to what a transcendent height in the cultivation of his powers is he capable of soaring! True his station is humble; yet he who, with an unstained hand, has honorably grasped the meed of righteous fame, has clothed himself with power, has wreathed his brow with undying laurels, and invested himself with the true majesty of his nature. Fame has been alternately assigned to the hero, the statesman, the philosopher, astronomer, theologian. But fame is not confined to any rank or pursuit in life. It can only exist in the breathings of righteousness. The philosopher and astronomer, though chained down to earth by the law of gravitation, and tabernacled with the worm, may nevertheless within a stirring greatness that allies them to high intelligences in future worlds, and that bids them be their brow aloft. They may station themselves on mental elevation above the world, and lift their towering heads to the stars. From this pinnacle of glory they may range in loftiest thought the universe of God and even struggle to grasp the unbounded empire over which Jehovah reigns, with all its moving worlds, and yet, if this be all, true fame does not lie here. It is not the birthright of the philosopher or astronomer, u

less they are in possession of something more than intellectual power.

True fame is not the birthright of the hero. The blaze of glory that has for ages encircled his head, and with its brilliancy so long dazzled the world, is beginning to grow dim. The laurels that decorate his sullen brow have been gathered at the cannon's mouth, from a soil enriched with human gore, and watered by the tears of bereavement. That fancied pinnacle of glory on which he proudly stands, has been gained by conquest and slaughter. His way to it lay over thousands of his fellow-creatures, whose warm hearts had ceased to throb; and the music that followed his march, was the widow's moan and the orphan's wail. True fame does not lie here. It sounds not in the cannon's roar, the clashing steel, the rattling drum, nor in the frightful crash of resounding arms! It is not heard in martial thunder. It is not seen in villages on fire, nor in Moscow's conflagration—that ocean of flame! True fame breathes not in the deep-heaving sigh of despairing love, nor draws its immortality from dying groans on fields of war. It has a higher origin—a nobler birth—a more elevated aim. True fame consists in the LOFTY ASPIRATIONS AFTER INTELLECTUAL AND MORAL TRUTH; and when these are found and cherished, that so deep will be the convictions of duty, sustained by sterling honor, that no popularity—no bribes of wealth and splendor—no fear of frowns, nor even

the hazard of life exposed to wasting tortures shall deter that man from expressing and maintaining such truth. He who does this, possesses true and righteous fame.

Should the scoffers of rising science challenge me to produce such an example of true fame ever being seen on earth, I would point them to one perfect specimen on the sacred page. I would point them to the SON OF MAN, in the majesty of whose virtues, honor, and firmness in proclaiming truth, language is impoverished, and human description fails, and the living light of eloquence is darkened forever.

LECTURE III.

LADIES AND GENTLEMEN :

PERHAPS I have dwelt sufficiently long upon the preliminaries of my subject. I have done so to bring distinctly before you its nature, and clearly state its incalculable importance to the human family. I have done so to remind you of the opposition, sneers, and scorns that the noblest sciences have encountered in the infancy of their being, and in all ages of the world. I have reminded you that this has been done, not by men of GENIUS, whose names are registered on the scroll of true fame, and have come down to future generations, but it has been done by that particular class of the learned who have so large a share of the love of approbation as to study public opinion, and follow it, right or wrong, and thus beg a momentary fame from the passing crowd, which is destined to expire in darkness, and vanish from human remembrance, before the breaking light of truth. I have dwelt thus long upon these points, so that opposition to this science may not surprise you, nor the real character of the opponent be mistaken.

Having removed every obstacle that might embarrass my course, and having plenty of sea-room, I am now ready to embark in defence of one of the greatest of causes. I stand before you to lecture upon the wonderful and mysterious science of Electrical Psychology. I stand here to exhibit by tangible experiments those wonderful phenomena that cluster around it, and philosophically to defend its paramount claims to immutable truth. The successful discharge of this incumbent duty, forces upon us the necessity of ranging the universe, and summoning the vast works of earth and heaven to the bar of reason, in order to investigate their *effects*, and trace them back to their correspondent causes. You are the empaneled jury to try this cause, and I rejoice that I have the honor to argue so interesting a point before the CONGREGATED TALENT AND WISDOM OF MY COUNTRY. However skeptical men may be in relation to any thing new, yet so far as stern reality is in its nature concerned, we have this pleasing consideration, that the *unbelief* of men cannot frown truth into falsehood, nor can the *belief* of men smile falsehood into truth. Hence the *belief* or *unbelief* of mortals cannot in the least affect those truths that God has established inherent in nature, and with which his unbounded universe swarms.

I stand here to defend the electrical theory of the universe against the assaults of men, to notice the immense variety of material existences, to glance at the

animated forms of living beauty, to scrutinize the chemical properties of created substances, and to pour, if possible, the light of truth on rolling worlds. Let us even venture to step back beyond the threshold of creation—venture to lift the dark curtains of primeval night, and muse upon that original, eternal material, that slumbered in the deep bosom of chaos, and out of which all the tangible substances we see and admire were made. That eternal substance is *electricity*, and contains all the original properties of all things in being. Hence all worlds and their splendid appendages were made out of electricity, and by that powerful, all-pervading agent, under Deity, they are kept in motion from age to age. Electricity actuates the whole frame of nature, and produces all the phenomena that transpire throughout the realms of unbounded space. It is the most powerful and subtile agent employed by the Creator in the government of the universe, and in carrying on the multifarious operations of nature. Making a slight variation in the language of the poet, I may with propriety say—

“ It warms in the sun, refreshes in the breeze,
Glow in the stars, and blossoms in the trees;
Lives through all life, extends through all extent,
Spreads undivided, operates unspent;
Breathes in our souls, informs our mortal part,
As full, as perfect, in a hair as heart;
As full, as perfect, in vile man that mourns,
As the rapt seraph, that adores and burns;

It claims all high and low, all great and small ;

197

It fills, it bounds, connects, and equals all."

221

It is immaterial to what department of this globe and its surrounding elements we turn our attention, electricity is there. Wherever we witness convulsions in nature, the workings of this mighty, unseen power are there. It writes its path in lightning on the sullen brow of the dark cloud, and breathes out rolling thunder. Though cold and invisible in its equalized and slumbering state, yet it is the cause of light and heat, which it creates by the inconceivable rapidity of its motion and friction on other particles of matter. It is the cause of evaporation from basined oceans and silvery lakes—from majestic rivers and rolling streams and from the common humidity of the earth. It forms aerial conductors in the heavens, through which the moisture in vapory oceans is borne to the highest portions of our globe, and stored up in magazines of rain and snow, and hail ! It is electricity that, by its coldness, condenses the storm, and opens these various magazines in mild beauty or awful terror on the world. It is electricity that, by the production of heat, rarifies the air, gives wings to the wind, and directs the course. It is this unseen agent, that causes the gentle zephyrs of heaven to fan the human brow with touch of delight—that moves the stirring gale—that arms the sweeping hurricane with power—that gives to the roaring tornado all its dreadful eloquence.

vengeance and terror, and clothes the mid-day sun in light. It gives us the soft, pleasing touches of the evening twilight, and the crimson blushes of the rising morn. It is *electricity* that, by its effects of *light* and *heat*, produces the blossoms of spring, the fruits of summer, the laden bounties of autumn, and moves on the vast mass of vegetation in all the varieties and blended beauties of creation. It bids winter close the varied scene. It is electricity that, by its most awful impressions, causes the earthquake to awake from its Tartarean den, to speak its rumbling thunder, convulse the globe, and mark out its path of ruin.

If we turn to man, and investigate the secret stirrings of his nature, we shall find, that he is but an epitome of the universe. The chemical properties of all the various substances in existence, and in the most exact proportions, are congregated and concentrated in him, and form and constitute the very elements of his being. In the composition of his body are involved all the mineral and vegetable substances of the globe, even from the grossest matter, step by step, up to the most rarefied and fine. And, *lastly*, to finish this masterpiece of creation, the brain is invested with a living spirit. This incomprehensible spirit, like an enthroned deity, presides over, and governs through electricity, as its agent, all the voluntary motions of this organized, corporeal universe; while its living presence, and its involuntary, self-moving

powers cause all the involuntary functions of life to proceed in their destined course. Hence human beings and all animated existences are subject to the same grand electrical law that pervades the universe, and moves all worlds under the superintendence of the involuntary powers of the infinite Spirit.

On this principle, it will be plainly perceived, that as man is subjected to the same common law that pervades the universe, so *electricity* is the connecting *link* between MIND and MATTER. As it is co-eternal with spirit or mind, so it is the only substance in being that mind can directly touch, or through which it can manifest its powers. It is the servant of the mind to obey its will and execute its commands. It is through electricity, that the mind conveys its various impressions and emotions to others, and through this same medium receives all its impressions from the external world. It is by electricity that the mind contracts the muscles, raises the arm, and performs all the voluntary motions of this organized body. This I will now proceed to prove.

It will be readily perceived by every one acquainted with electrical science, that if I can find an individual standing in a *negative* relationship to myself, or by any process render him so, then I, being the *positive* power, can, by producing electrical impressions from my own mind upon his, control his muscles with the most perfect ease. This is evident, because the *posi-*

tive and *negative* forces electrically and magnetically blend, are equal in power, and paralyze each other ; or, on the contrary, produce motion. This great and interesting truth I will prove to a demonstration, by experiments upon ladies and gentlemen in this audience, while they are entirely awake, and in perfect possession of all their reasoning faculties. Before I proceed to produce these astonishing and even startling results, I will, in the first place, prove that ELECTRICITY is the CONNECTING LINK between MIND and inert MATTER, and is the AGENT that the mind employs to contract and relax the muscles, and to produce all the *voluntary* and *involuntary* motions of the body.

To bring this before you in the most plain and intelligible manner, I would first remark that the brain is the fountain of the nervous system, from whence it sends out its millions of branches to every part of the body. Indeed, the brain is but a congeries of nerves, and is the immediate residence of the living spirit. This spirit or mind is the cause of all motion, whether that motion be voluntary or involuntary. It wills the arm to rise, and immediately the arm obeys the mandate ; while the *very presence* of this mind in the brain, even though wrapped in the insensibility of sleep, produces all the involuntary motions of the vitals, and executes the functions of life.

To establish the fact that *electricity* is, indeed, the *connecting link* between the MIND and the BODY, I

would in the first place distinctly remark, that mind cannot come in direct contact with gross matter. My mind can no more directly touch my hand, than it can the mountain rock. My mind cannot touch the bones of my arm, nor the sinews, the muscles, the blood-vessels, nor the blood that rolls in them. In proof of this position, let one hemisphere of the brain receive what is called a stroke of the palsy. Let the paralysis be complete, and one half of the system will be rendered motionless. In this case, the mind may will with all its energies—may exert all its mental powers—yet the arm will not rise, nor the foot stir. Yet the bones, sinews, muscles, and blood-vessels are all there, and the blood as usual continues to flow. Here then we have proof the most irresistible, that mind can touch none of these; for what the mind can touch it can move, as easily as what the hand can physically touch it can move. Our proof is so far philosophically conclusive.

I would now remark, that it is equally certain my mind can touch some matter in my body, otherwise I could never raise my arm at all. The question, then, arises, What is that mysterious substance which the mind can touch, as its prime agent, by which it produces muscular motion? In the light our subject now stands, the answer is most simple. It is that *very substance* which was disturbed in this paralysis, and *that is the nervous fluid, which is animal electricity,*

and forms the connecting link between mind and matter. Mind is the only substance in the universe that possesses inherent *motion* and living *power* as its two PRIMEVAL EFFICIENTS. These two seem to be inseparable, because there can be no manifestation of power except through motion. Hence MIND is the first grand moving cause. It is the *first link* in the magnificent chain of existing substances. This mind wills. This mental energy, as the creative force, is the *second link*, and stirs the nervous force, which is electricity. This is the *third link*. This electricity causes the nerve to vibrate. This is the *fourth link*. The vibration of the nerve contracts the fibre of the muscle. This is the *fifth link*. The contraction of the muscle raises the bone or the arm. This is the *sixth link*. And the arm raises dead matter. This is the *seventh link*. So it is through a chain of seven links that mind comes in contact with dead matter; that is, if we allow the creative force—the *will*—to be one link. This *will*, however, is not a *substance*, but a mere energy, or *result* of mind. To be plain, it is mind that touches electricity—electricity touches nerve—nerve touches muscle—muscle touches bone—and bone raises dead matter. It is, therefore, through this concatenation or chain, link by link, that the mind gives motion to and controls living or dead matter, and not by direct contact with all substances. Hence the proof is clear and positive, that the mind can come in contact with, and

by its volition control, the electricity of the body, and collect this subtile agent with fearful power upon any part of the system.

It is evident that the mind holds its residence in the brain, and that it is not diffused over the whole system. Were it so, then our hands and feet would think, and in case they were amputated, we should lose part of our minds. If, then, the MIND, invested with ROYALTY, is enthroned in the brain—and if the mind command the foot to move, or the hand to rise, then it must send forth from its presence an agent, as its PRIME MINISTER, to execute this command. This prime minister is ELECTRICITY, which passes from the brain through the nerves, as so many telegraphic wires, to give motion to the extremities. On this principle, how easy it is to understand the philosophy of a paralysis. The nerve, as the grand conductor of the motive power, is obstructed by some spasmodic collapse, and the prime minister cannot pass the barrier that obstructs its path. In this case, the mind, as the enthroned monarch, may WILL the arm to rise, but the arm remains motionless. But remove that barrier, the agent passes, and the arm must rise. Hence it is easily seen, that all motion and power originate in mind.

I have now brought before you the connecting link between mind and matter, and through this have shown you the philosophy of the contraction of the human

muscles through mental energy. This has ever been, and still is, considered an inscrutable mystery in Physiology. Whether it is now revealed or not, is submitted to your decision. To my mind, the argument in its defence is irresistible.

Having clearly and philosophically established the truth, that electricity, in the form of nervous fluid, is indeed the connecting link between mind and *inert* matter, the question now presents itself—If the mind continually throws off electricity from the brain by its mental operations, and by muscular motion, then how is the supply kept up in the brain—through what source is it introduced into the system, and how conveyed to the brain? I answer, through the respiratory organs electricity is taken into the blood at the lungs, and from the blood it is thrown to nerves and conducted to the brain, and is there secreted and prepared for the use of the mind. It will be impossible for me to argue this point fully unless I explain at the same instant the philosophy of the circulation of the blood. As I differ also with physiologists on this point, and as I do not believe that the heart circulates the blood at all, either on the hydraulic, or any other principle, so I will turn your attention to this subject.

The philosophy of the circulation of the blood is one of the grandest themes that can be presented for human contemplation. While discussing this matter, it will be clearly made to appear how electricity is gath-

ered from the surrounding elements, carried into the system and stored up in the brain to feed the mind with impressions. I desire it to be distinctly understood, that when I speak of the *electricity, galvanism, and magnetism* of the human system, or of the *nervous fluid*, I mean one and the same thing. But before I proceed to notice the philosophy of the circulation of the blood, and the secretion of the nervous fluid, I will first make a few observations in relation to the *nerves and blood-vessels*, so that I may be distinctly understood.

I have already stated, that the brain is the fountain of the nervous system, and that both its hemispheres are made up of a congeries of nerves. They both pass to the cerebellum; and the spinal marrow, continued to the bottom of the trunk, is but the brain continued. In the spinal marrow, which is the grand conductor from the brain, is lodged the whole strength of the system. From this spinal marrow, branch out thirty-two pairs of nerves, embracing the nerves of motion and those of sensation. From these branch out others, and others again from these; and so on till they are spread out over the human system in network so infinitely fine that we cannot put down the point of a needle without feeling it—and we cannot feel, unless we touch a nerve. We see, therefore, how inconceivably fine the nervous system is. In all these millions of nerves there is no blood. They contain the electric

fluid only, while the blood is confined to the veins and arteries. I am well aware that the blood-vessels pass round among the convolutions of the brain, and through them the blood freely flows to give that mighty organ action ; but in the nerves themselves there is no blood. They are the residence of the living mind, and its prime agent, the electric fluid.

Though I have frequently, in my public lectures, touched upon the philosophy of the circulation of the blood, and hence those remarks were reported and published in my "Lectures on the Philosophy of Animal Magnetism, in 1843," in connection with my views of the connecting link between mind and matter, yet I have never taken up the subject in an exact, full, and connected detail of argument. This I will now proceed to do in connection with the secretion of the nervous fluid.

I would, then, in the first instance remark, that the air we breathe, as to its component parts, is computed to consist of twenty-one parts OXYGEN, and seventy-nine parts NITROGEN. Electricity, as a universal agent, pervades the entire atmosphere. We cannot turn the electric machine in any dry spot on earth without collecting it. Oxygen is that element which sustains flame and animal life. Neither can exist a moment without it, while nitrogen, on the contrary, just as suddenly extinguishes both. The atmosphere, in this compound state, is taken into the lungs. The

oxygen and electricity, having a strong affinity for moisture, instantly rush to the blood, while the nitrogen is disengaged and expired. The blood, being oxygenized and electrified, instantly assumes a bright cherry-red appearance, and by this energizing process has become purified and prepared for circulation. The lungs, and the blood they contain, are both rendered electrically *positive*; and we know that in electrical science two positives resist each other and fly apart. Hence the lungs resist the blood and force it into the left ventricle of the heart. The valve closes and the blood passes into the arteries. Hence arterial blood is of a bright cherry-red hue. It is by the *positive* force of electric action, propelled through every possible ramification of the arterial system till all its thousands of minute capillary vessels are charged. Along these arteries and all their thousands of capillary branches are laid nerves of involuntary motion, but no nerves whatever attend the veins. Why is this so? Why is it, that nerves, like so many telegraphic wires, are laid along the whole arterial system in all its minute ramifications, but that none are laid along the venous system? I press this question—Why do nerves attend the arteries, while none attend the veins? I answer, that nerves are laid along the arteries to receive the electric charge from the *positive* blood that rolls in them, which charge the blood received from the air inspired by the lungs. But as the venous blood is *nega-*

tive, it has no electricity to throw off, and hence needs no attendant nerves to receive a charge—because that very electric charge, which the blood receives from each inspiration at the lungs, is thrown off into the nerves by friction, as it rolls through its destined channels in crimson streams. At the extremities of the arterial system—at the very terminus of its thousands of capillaries, the last item of the electric charge takes its departure from the positive blood, escapes into the attendant nerves, through them is instantly conducted to the brain, and is there basined up for the use of the mind.

The arterial blood, having thrown off its electricity as above described, assumes a dark—a purplish hue. It enters the capillaries of the veins, which are as numerous as those of the arteries. The blood is now *negative*, and as the lungs, by new inspirations, are kept in a *positive state*, so the venous blood returns through the right ventricle of the heart to the lungs, on the same principle that the *negative* and *positive* forces rush together. There it is again electrified and oxygenized, changed to a bright cherry-red color, is again rendered *positive*, and is thus purified and prepared once more for arterial circulation. We now clearly perceive that it is electrically the blood circulates, and electrically it recedes from, and returns to, the lungs through the two ventricles of the heart. The heart does not circulate the blood at all, as phys-

iologists contend. The heart is the SUPREME REGULATOR of this sublime and constantly ebbing and flowing OCEAN of crimson life, with all its majestic rivers and frolicking streams, and determines with exactness how rapidly the whole shall flow.

LECTURE IV.

LADIES AND GENTLEMEN :

I HAVE in my last Lecture touched upon the philosophy of the circulation of the blood, the nervous system, and the secretion of electricity upon the brain, which I call the nervous fluid. As this part of my subject must, on account of its importance, possess peculiar interest to us all, I desire to dwell upon it a few moments longer.

From the arguments already offered, it will be clearly perceived by every philosophic mind, that the circulating system is in reality *two* distinct systems. The *first* is the ARTERIAL SYSTEM, that carries the *positive blood*, which is, as before stated, of a bright cherry-red color, and is ever flowing from the heart to the extremities. The *second* is the VENOUS SYSTEM, that carries the NEGATIVE BLOOD, which is of a purple color, and is ever flowing from the extremities to the heart. To these two circulating systems, the heart, with its two auricles, two ventricles, and valves, is exactly adapted, so as to keep the *positive* and *negative* blood apart, and to regulate the motion of both

And it will be perceived that the nervous system most perfectly corresponds with what I have said of the circulating system. I mean that nerves of involuntary motion are laid along the arteries to receive the charge of electricity from the *positive* blood that flows in them. These views of the circulation of the blood are strengthened by the fact, that the blood contains a certain portion of iron ; and we well know that iron becomes a magnet only by induction, and loses its magnetic power the moment the electric current passes from it. Hence the blood, through the agency of the iron it contains, can easily assume a *positive state* at the instant it receives the electric charge from the air at the lungs. It can then pass into the arteries, and by friction throw off its electricity into the nerves, and again assume a *negative state* as it enters the veins.

I now consider the ELECTRIC OR MAGNETIC CIRCULATION of the blood philosophically and irresistibly proved. Hence the position which many assume, that the heart circulates the blood on the hydraulic or vacuum principle, is utterly unfounded in truth. And that the heart, in accomplishing this, exerts a force, as they contend, of more than one hundred thousand pounds, is too preposterous to be believed. I grant that the heart is the strongest muscle in the human system ; but who can for one moment believe that its motive power is equal to fifty tons ? The heart, as I *have already observed*, does not circulate the blood at

all ; nor on the contrary does the blood cause the heart to throb. The heart and lungs both receive their motions from the cerebellum, which is the fountain and origin of organic life and involuntary motion. Hence the involuntary nerves from the cerebellum throb the heart and heave the lungs, and the electricity contained in the air they inspire, circulates the blood and supplies the brain with nervous fluid, as I have already explained.

Perhaps, however, the inquiry may here arise, What proof is there that the involuntary nerves from the cerebellum throb the heart and heave the lungs, and that the blood is not made to circulate from the same cause ?

This double interrogatory is easily answered. Insert, for instance, a surgical knife between the joints of the vertebræ, and cut off the spinal marrow below the lungs and heart—all the parts below this incision will be so completely paralyzed, and voluntary motion and sensation so entirely destroyed, that we have no power to move the limbs by any volition we may exert ; nor have we any power to feel, even though the paralyzed limbs should be broken to pieces by a hammer, or burned with fire. Yet in these immovable and unfeeling parts the blood continues to circulate as usual through the veins and arteries. This is proof positive that the blood is not made to flow by any power whatever invested in the cerebellum, but, as before proved,

by the *positive* and *negative* forces of that electricity contained in the air inspired by the lungs. But let the spinal marrow be severed above the lungs and heart, and both will be instantly paralyzed and cease their motions ; yet the last inspiration taken in by the lungs will cause the blood to circulate till it floods the right ventricle of the heart with venous blood, and empties the left ventricle of its arterial blood. This is proof the most irresistible, that the **HEART AND LUNGS ARE MOVED BY AN INVOLUNTARY NERVOUS FORCE ORIGINATING IN THE CEREBELLUM**, while the blood is circulated by the *positive* and *negative* forces of that electricity which is taken in with the air at the lungs. The lungs merely act as a double force-pump to bring in the surrounding atmosphere, extract from it a proper supply of the vital principle to feed the bright and burning flame of life, and to reject and expire the dregs unfit for that end. This is perhaps as much as it is necessary to say in relation to the circulation of the blood, and the constant secretion of the nervous fluid from the arterial blood to the brain. I now turn to the philosophy of disease, and will be brief as possible.

It is generally supposed by medical men, that there are innumerable causes for the various diseases in existence, and that even one disease may have many causes in nature to produce it. But I contend, that *there is but one grand CAUSE for all diseases, and thi*

is the disturbing of the vital force of the body. There is in every human being a certain amount of electricity. This is, as I have said, the most subtile and fine material in the body ; is the power, as has been shown, that moves the blood ; and is the agent by which the mind, through the nerves, contracts the muscles and produces motion. And as all the convulsions and operations in nature and in man invariably begin in the invisible and finest substances in being, and end in the most gross, so electricity, in the human system, is the cause of all the effects there produced, whether salutary or otherwise. When this electricity is equalized throughout the nervous system, the blood will also be equalized in its circulation, and the natural result is health. But when it is thrown out of balance, the blood will, in like manner, be also disturbed, and the natural result is disease ; and the disease will be severe or mild in the same ratio as the vital force is more or less disturbed.

I am well aware that medical men are much inclined to examine the patient's pulse, and watch the movements of the blood. They seem to think that nearly all diseases originate in the blood, and hence, under this impression, hundreds of specifics, or nostrums, have arisen to purify the blood, as though it contained some foreign properties that rendered it impure, and that these, by some medical treatment, must be extracted or removed from the system. But all this is fallacious,

as the blood contains no foreign properties to render it impure. The blood becomes impure only through a disturbed circulation. It can be purified by no other substances in being, except what are contained in the air at the lungs. These are oxygen and electricity. The whole blood in the body must, every few moments, be passed through the lungs to be purified and preserved from putrefaction. If the circulation, in any part of the body, be obstructed, or thrown out of balance, so that the blood cannot pay its timely visit to the lungs, it must become extravasated and impure. If, in any part of the body, there is a complete obstruction, so that the blood is entirely retained, then inflammation, ulceration, and corruption must ensue.

I now turn directly to the subject, and call your undivided attention to the philosophy of disease. The operations of the mind, and the nervous system of man, have been too much overlooked by medical men who have paid great attention to the blood, and to the more gross and solid parts of the body. But it is evident that disease begins in the electricity of the nerves and not in the blood. Electricity is the starting point. From thence it is communicated to the blood, from the blood to the flesh, and from the flesh to the bones which are the last effected. It begins in the finest, and ends in the grossest particles of the system. The *unseen* are the starting powers.

I have already remarked that the brain is the four

tain of the nervous system, and sends forth its millions of branches to every possible part and extremity of the body. This nervous system is filled with electricity, which is the agent or servant of the royal mind, who, as monarch, holds his throne in the brain. From thence the mind, by its volitions, controls one half of the electricity of the system. It controls all that is contained in the voluntary nerves, but has no such control over the other half, which is confined to the involuntary nerves.

Though there is but one grand cause of disease, *which is the electricity of the system thrown out of balance*, yet there are, nevertheless, *two modes* by which this may be done. It may be done by mental impressions. And so it may be done by physical impressions from external nature. I will first notice how diseases are produced by *mental impressions*.

Millions of our race have been swept from the light of life to the darkness of death by various diseases caused by mental impressions. Misfortune and distress have fallen upon many a father, a mother, and many a child. They have shut up in their bosoms all these mental woes, and brooded over their misfortunes in secret, concealed grief. Melancholy took possession of the heart, the vital force was disturbed, the system was thrown out of balance, disease was engendered, and they went to their graves.

I am now addressing this audience. The action of

my mind has called the electricity of the system from the extremities to the brain. The blood has followed it. My feet being robbed of their due proportion of the vital force, are, in the same ratio, cold, and hence, this is, so far, disease. And unless I ceased speaking, and suffered a reaction to take place, it would bring me to my grave.

A man accumulates a fortune of two hundred thousand dollars. He loses one half of it, and is hurled in distress. He broods over his misfortune. The mind is in trouble; it shrinks back on itself. The electricity of the system, this servant of the mind, leaves the extremities and approaches the brain, the throne of the master. The blood follows on; the excitement becomes great, and he believes he shall die in an almshouse. He is a monomaniac. Suppose he now loses the other half of his fortune, and his mind will become involved in still greater distress. This mental action calls an increased quantity of electricity, that is, of nervous fluid, to the brain, and an equal amount of blood follows on. He is now entirely deranged, and his feet are incessantly cold, because the brain has robbed them of their due proportion of the vital force. Now do you not perceive, that if these forces are dispersed from the brain, and the circulation equalized, that his reason will be restored? There is not too much of blood and electricity in the system, but *there may be too much in any one department of the*

system. I will now suppose him once more in possession of his reason. Now bring him intelligence that his darling child is crushed to atoms. The mind suddenly shrinks back on itself; the electric, or nervous fluid, instantly darts to the brain, like a faithful servant to see what distresses the master. The blood as suddenly follows the servant. The storm rages, and a fit ensues. Let the news be still more startling, and the congregated forces will, in the same ratio, be increased upon the brain, and he drops a corpse! So we perceive that, in all these instances, there is but one cause of disease. The only difference we have witnessed in the effects produced, was a gradually increased action, occasioned by an increased power of the same cause, even from the slightest excitement, gradually up to that fearful point where it produced instant death. An instance analagous to this, transpired here among you, in the case of the distinguished statesman, John Quincy Adams. Perhaps too much anxiety and thought for the welfare of his country, at his advanced age, called the forces to the brain, and the brilliant lamp of reason and life was extinguished! He has entered on other scenes!

I have thus far confined my remarks to effects produced upon the brain by the electro-nervous fluid and blood, which were called there by the various emotions, passions, and sensations of the mind. But that these forces should invade the territory of the brain, and

produce such results, depends, however, upon the condition of the brain as to its comparative physical strength with the other parts of the system. In this view of the subject, had the same misfortunes as to loss of property above stated been visited upon this same individual when his brain was firm, a different disease would have been the result. Suppose that his brain, as to its physical structure, had been strong and firm, but that his lungs had been weak. Now let the same misfortunes befall him. His mind again shrinks back on itself; the electro-nervous force, as before, starts for the brain, but is not allowed to enter this palace of the distressed monarch, and it stops at the lungs, the weakest and nearest post. The blood next follows on in pursuit of the servant, and takes up its abode with him. Inflammation sets in, and, if the trouble of the monarch continues, tubercles form, ulceration takes place, and death ensues. It was consumption.

But suppose the lungs had been strong, and that the stomach had been, by some trivial circumstance, rendered the weakest part. The electro-nervous fluid and blood would, in this case, have gone there, and taken possession of that post. Inflammation, canker, with morbid secretions would have ensued, and even ulcers might have been formed. The digestive organs would have been weakened, and dyspepsia, with all its horror of horrors, would have been the result. If the liver

had been the weaker spot, the same forces, under the same mental impressions, would have congregated there, and produced the liver complaint. If the stomach and liver had both been strong, and the spine weak, it would have been a spinal complaint. If all these had been physically firm, and the kidneys weak, the same forces would have produced a disease of the kidneys. And if all in the regions of the brain and trunk had been firm, and a mere blow had been inflicted upon the hip, knee, or any part of the lower limbs, the electro-nervous force and the attendant blood would have gone there, and produced the white swelling, or any other species of inflammation and distress. So we perceive, that the same CAUSE, under MENTAL IMPRESSIONS, may produce any of these diseases. As to the character of the disease, it merely takes its name from the organ or place in the body where it may locate itself. Hence diseases differ one from another only as the various diseased organs, their motions, secretions, and functions may differ—or as the various located parts of the body invaded by disease may differ from each other. But the producing CAUSE of all these diseases is one and the same. It is the ELECTRO-NERVOUS FLUID of the body.

Having said all that I at present deem necessary in relation to the disturbing of the nervous force by MENTAL IMPRESSIONS, I will now turn your attention to the disturbing of the nervous force by PHYSICAL IMPRESSIONS.

As the mind in distress—in secret melancholy and grief—has disturbed the nervous force, which has engendered disease by calling the blood and other fluids of the body to its presence, and thus sent millions to their graves—as it has produced all the diseases we have mentioned and even hundreds more—so the same diseases and hundreds more are also produced by the nervous force when it is disturbed by *physical impressions* from external nature.

I am well aware that *mental* and *physical* impressions may be termed *causes* of disease; but it will be remembered, that medical men contend that there are *remote* and *proximate* causes of disease. I am on the latter, and contend that there are not thousands of *proximate* causes, but only *one* grand PROXIMATE CAUSE of disease, and this is the disturbing of the nervous fluid, or throwing the electricity of the system out of balance; and that diseases begin in the electric force of the nerves, and not in the blood. They begin in the invisible and finest substance of the body, and end in the gross. Hence the same cause that produces monomania, produces entire derangement, fits, headache, and even the common excitement of the brain in a public speaker. The same cause produces consumption, dyspepsia, liver complaint, spinal affections, pleurisy, cholera, dysentery, inflammations, fevers, etc. This subtle, *disease-causing* principle, is the ELECTRO-NERVOUS FLUID. When equalized throughout the

system, it is the cause of health, for it controls the blood and other fluids, and when thrown out of balance, it is the cause of disease. Hence the minister of health and sickness—of life and death—is within us, and is one and the same principle. As electricity is the efficient cause of all convulsions, calms, and storms in nature, and of all the pleasing or awful phenomena that transpire in earth, air, or ocean, or in the vegetable or mineral kingdom, so, as man is but an epitome of the universe, it is electricity in the form of nervous fluid that produces all the convulsions, calms, and storms in his own system.

We have seen the various secret stirrings of electricity in the human nerves under *mental impressions*, in producing insanity, fits, consumptions, etc. We witness the same mournful results when that subtile power is moved by *physical impressions*. A wet foot, for instance, may throw the electro-nervous fluid out of balance, and this subtile force may suddenly check the lacteal or other secretions, and also produce insanity, or fits, or by locating itself upon the lungs, it may produce consumption. The fact is, that the electro-nervous fluid, when disturbed at the extremities, or on the surface of the body, always retires inward, and locates itself upon the weakest organ, or upon some weak portion of the vitals—the blood follows, and disease is the result. As I have fully explained this when noticing *mental impressions*, so there is no occasion of my par-

ticularizing. I will merely say, that a sudden exposure to a damp air, sitting upon a cold rock, lying upon the ground and suddenly falling asleep, or sitting with the back to a current of air while in a perspiration—all, or any of these, may at times disturb the electro-nervous force, and arouse this *disease-causing power* from its slumberings. This may throw the blood out of balance, and by locating themselves upon the weakest organ or weakest part of the system, engender disease. Or the nervous force may be disturbed by eating or drinking too much or too little of wholesome substances, or by eating and drinking unwholesome or poisonous substances, and all these correspondent diseases produced.

It is now clearly seen how *mental* and *physical* impressions disturb the electricity of the system, which locates itself upon the weakest organ, calls the blood to its aid, and brings disease, pain, and death. So we perceive, that the same nervous fluid which, when equalized, produces health, is, when thrown out of balance, the cause of disease. The whole electricity of the nerves is, of course, one hundred per cent. Fifty per cent. is under the voluntary control of the mind, and belongs to the voluntary nerves, and the other fifty per cent. is under the control of the involuntary powers of the mind, and belongs to the involuntary nerves. Now if the whole fifty per cent. of either of these forces, which when equalized is health, should be suddenly collected upon any one organ, it would be the

destruction of that organ. If the mind, on hearing bad news, or by some sudden distress, should call the whole fifty per cent. of electricity under its control to the brain, apoplexy and death must ensue. This would be done by a *mental impression* on the voluntary nervous force, causing the mind to shrink back on itself and become passive. But the same melancholy result could be produced by eating, drinking, or some other *physical impression* on the involuntary force over which the mind has no such control. Hence it will be understood, that all diseases, originating under mental impressions, are produced by the fifty per cent. of voluntary nervous force. But those diseases, originating under physical impressions, are produced by the fifty per cent. of involuntary nervous force, and over which the mind has no control.

If either of these electro-nervous forces, to a certain amount, should be called to a muscle, it would be pain. If called to a still greater extent, it would be inflammation; and if the whole fifty per cent. were called there, it would be mortification, and the ultimate and absolute destruction of the muscle. The same result would follow in case either of these forces were called to any organ in the system. It would be the destruction of that organ.

There are three kinds of pain: *First*, a pain produced by negative electricity, which attracts the blood to the spot, and is ever attended with inflammation.

Second, a pain produced by positive electricity, which repels the blood, and, though equally severe, is never attended with inflammation. **Third**, a pain produced by the confused mixture of the two forces, and consists in a burning, itching, or prickly sensation, and is often very distressing.

I have now given you a few hints on the philosophy of disease, which are of course novel to you all; but they are, nevertheless, as interesting and important to the welfare of our race, as they are novel and strange. Medical men have ever noticed the great effect that the mind has upon the body, both as it regards a disastrous or salutary result. Hence they keep up the brightest hopes of their patients as to recovery, and carefully guard every one against uttering to them a word of discouragement. These effects they have seen, but not understanding the connecting link between mind and matter, the true philosophy of disease has been by them entirely overlooked, and in relation to this science they may after all cry "*humbug*." But this will avail them nothing, for truth, after all, will stand unshaken, and be appreciated by after generations, when opposition shall have been interred, with no hope of its resurrection. In view of our subject, so far as it regards mental impressions, we see the supreme importance of maintaining a reconciled state of mind. Equanimity of mind is the parent of health, peace, and happiness, and the noblest test of the true Christian. When we

see thousands always restless, complaining of cold and heat, and wet and dry—complaining of their own condition, and finding fault with others, and dissatisfied with the events of Providence—we need not marvel that so many complain of indisposition and disease. This state of mind produces them. So beware.

LECTURE V.

LADIES AND GENTLEMEN :

WHEN we reflect how extensive a field the philosophy of disease naturally occupies, and how vast a range we must take in order to inspect minutely its several parts, it will then be seen that my remarks, in my last Lecture, have been brief in comparison with the vastness of the subject. I flatter myself, however, that my views are understood, and that the importance of the doctrine of mental and physical impressions, in relation to disease, is clearly seen, and fully appreciated by you all. I believe it to be founded in immutable truth, and that it will survive the crush of empires and the revolution of ages.

Having brought forward the PHILOSOPHY OF DISEASE in my last Lecture, I now turn to the RATIONALE OF ITS CURE in this.

In discussing the doctrine of mental impressions, I have clearly and irresistibly proved that the mind by shrinking back on itself in fear, melancholy, and grief, in the day of adversity, misfortune, and distress, can disturb the electro-nervous fluid, and allow it to con-

centrate itself upon any organ of the body and engender disease. If, then, the mind can disturb the equilibrium of the nervo-electric force and call it to some organ so as to produce disease, then the mind can also disperse it, equalize the circulation, and restore health. This it can do by a mental impression, admitting the impression to be sufficiently great. For example: A man in possession of five thousand dollars is riding homeward on horseback in the evening. He is within a mile of his house. He is weary and his head aches so severely that he is obliged to walk his horse. He is so indisposed and faint that he can but just keep his saddle. From a lonely dismal spot at the road side, a robber springs and seizes his horse's bridle—presents a pistol, and exclaims, "Your money, or your life!" The rider, with a loaded whip, and at the impulse of the moment, suddenly strikes the robber's arm. This causes the pistol to discharge, and adds to the confusion of the moment. The rider, scarcely knowing what he is about, puts spurs to his horse. He darts off at the top of his speed. Before he is aware, he is at his own door. He dismounts and finds himself safe. The vital force is driven to the extremities, and his hands and feet are warm. Where is his headache now? It is gone. The supreme impression of his mind drove the electro-nervous fluid from his brain—the blood followed it—a reaction took place, and he was well. Is there any thing strange in this?

No! Then there is nothing strange in this science, for it is the curing of diseases by the doctrine of impressions.

I desire it to be distinctly understood how this power operates. Remember mind touches the electro-nervous fluid, moves it—and this fluid moves the blood. Electrical Psychology is the doctrine of impressions, and the same disease that mind, or even physical impressions can cause, the mind can remove, if the patient be in the psychological state. Because mental impressions to any extent we please can be produced upon him. It is therefore immaterial from what source a disease may arise, or what kind of a disease it may be, the mind can, by its impressions, cause the nervous fluid to cure it, or at least to produce upon it a salutary influence. If exposure to heat or cold, dampness or dryness, or to any of the changing elements, should call the nervous fluid to the lungs, and disturb the circulation of the blood, so as to produce inflammation, the mind could disperse and equalize it, and thus effect a cure as readily as though this inflammation of the lungs had been brought on by melancholy and grief, or by any other mental distress. Or if these exposures had caused any other disease or pain in the system, the mind could have had the same power to remove it, as though it had been caused by mental distress. Or if by eating, drinking, or by sedentary habits, dyspepsia had been produced, the mind could have had the

same power to produce a salutary result, or even to cure it as though it had been caused by mental distress. I do not mean that a cure can be effected by the electro-nervous force, *through mental impressions*, if there be any organic destruction of the parts diseased. The consumption, for instance, could not be cured if the lungs were ulcerated; sight could not be restored if the optic nerve were destroyed; nor could deafness be removed if the auditory nerve were destroyed. In these cases, even, medical remedies, it must be granted, would be of no avail, because there is no foundation on which to build. In all I have said, or may say in regard to cures, I have reference only to curable cases. I mean, that the fifty per cent. of electro-nervous force, under the control of the mind, could effect a cure where there is no organic destruction, and where there is, at the same time, a sufficiency of vital force left to build upon, so as to be able to produce a sanative result. Nor do I mean to be understood that this science alone can at all times cure. It may require medicines to co-operate with it. As diseases are produced through mental and physical impressions, so through mental and physical impressions they must be cured.

Medicine produces a physical impression on the system, but never heals a disease. If a disease were ever healed through medicines, it was healed by the same sanative power as though it had been done by a

mental impression in accordance with the teachings of Electrical Psychology. This is evident ; because the sanative power is in the individual, and not in the medicine. Medicines and mental impressions only call that sanative principle to the right spot in the system so as to enable it to do its work. The following example will explain my meaning on this particular point :

You enter a garden and see a peach-tree with its fruit not fully grown, but so heavily laden, that one of its limbs is partially split from the trunk. The gardener is aware that if it be neglected till the fruit grows to maturity, the limb will be entirely parted from the tree and die. He carefully raises the limb till the split closes, and puts under it a prop to keep it to its place. He winds canvas around the wounded part, and over this he puts tar. Now there is certainly no healing principle in the prop—there is none in the canvas—nor is there any in the tar. The prop merely sustains the weight of the limb, and keeps the split together ; the canvas is wound around it to prevent the tar from entering the split ; and the tar was applied to protect the whole from the air, rains, and external elements ; while the tree is left to the *inherent operations of its own sanative principles*. The sanative principle being in the tree, it must heal itself. So the healing principle is in man, as much so as it is in the tree. The healing principle in the tree is the

invisible electro-vegetative fluid. This moves and equalizes the sap, and the sap affects the wood. It is the electricity of the tree that does the work ; and this electricity is under the control of its vegetable life. So the healing principle in man is the *invisible electro-nervous fluid.* This moves and equalizes the blood, and the blood affects the flesh. It is the electricity of the system, under the control of the mind.

The position is incontrovertible, that the healing principle is in man. Admitting it to be electricity, or what I call the electro-nervous fluid of the system, it is then easily seen that there is no healing principle in medicine, and it is also understood what effect medicine must have upon the system in order to produce a salutary influence. It must equalize the electricity, as before remarked, and call it to the proper spot, so as to enable it to do its healing work. Hence, if the mind can so operate upon the fifty per cent. of the electro-nervous force under its control, as to equalize it, then it follows, as a matter of course, that the same healing result will be obtained as is effected by medicine. In either case there is no difference in the healing power. In both instances it is the same. The only difference is, that in the one case the healing power was made to act by the mind, which produced its *mental* impression, and in the other case by the medicine, which produced its *physical* impression.

It may now be asked, If medicine has no healing

property in it, then how can an emetic remove impurities from the stomach by vomiting the patient? In reply I would state, that it has never done so. In this I desire to be distinctly understood. I mean that an emetic is not the vomiting principle. The vomiting principle is in the man. It is the electricity of the system. The electro-nervous fluid of the brain is the vomiting principle. Let us understand the philosophy of this. Emetics, whether *mineral* or *vegetable*, possess those peculiar chemical properties that cause immense secretions. This effect is the whole secret of their power. An emetic, taken into the stomach, produces secretions most freely from the glands of the stomach, from the mucous membrane of the lungs, from the glands of the trachæ, and from the glands of the mouth and tongue. It robs them of their moisture which is continually accumulating upon the stomach. The parts being robbed of their moisture by this artificial action, the electricity from the nerves follows it, because electricity has a strong affinity for moisture. When a sufficiency of the electric force is drawn from the brain, and the blood having in the same ratio followed it, the countenance becomes pale—an expansion and collapse of the stomach takes place, and vomiting is the result. This is its philosophy. In proof of the fact, electricity cannot be gathered in damp weather. The moisture, for which it has a strong affinity, holds it.

After all I have said of medicine and its operations, it may yet be supposed that it possesses some healing principle, and that the emetic does vomit the patient. Why then will it not vomit a dead man? The answer is, because the vital force is gone, and the emetic is powerless. But why will it not vomit the man when he is worn out with disease and near his end? I answer, because the vital force in the man, on which vomiting depends, is wasted; and as it does not exist in the medicine, so the emetic, in its chemical action having no material to work upon, or to call to its aid, is powerless.

If this is not satisfactory to your minds in the settlement of the question whether the vomiting principle is in the medicine or in the patient, I will pursue the subject still farther. Suppose while eating strawberries and cream, you tell a sensitive lady that she has taken into the stomach a worm, or even a fly—she stops eating, and in a minute she vomits freely. How is this, when she has swallowed, in fact, neither worm nor fly? I answer, that the vomiting principle is in the brain. She believed that she had taken into the stomach what was stated; she kept her attention steadily and most intently upon it—and the mind threw the electro-nervous force from the brain to the stomach, until there was a sufficient quantity to produce an expansion and collapse of the stomach, and cause vomiting. Now the vomiting in this case and in the

case of the emetic was occasioned by one and the same thing, and that is the electro-nervous fluid. The only difference in the two cases is, that the emetic called it from the brain by a *physical* impression, and the mind forced it from the brain by a *mental* impression.

If the vomiting principle is not in us, why then does it turn the stomach to see an animal eating any thing very filthy, like the dog returning to his vomit? If this principle is not in us, how can it produce nausea? How can the motion of a vessel, and sometimes even the motion of a carriage, produce vomiting, unless it exists in the nervous force of the brain? Why will a fall, or blow upon the head, produce it.

The same is true in relation to cathartics, which excite the secretions of the glands, but of other glands than those affected by an emetic. A cathartic excites the secretions of the mucous glands of the alimentary canal. This draws the electric action from the brain, but mostly from the nerves on the surface of the body there, and produces its results. I have been thus particular upon the action and operation of emetics, as this one hint is sufficient to lead any reflecting mind to a correct impression of the relation in which medicines stand to the human system. They are the mere props and supports of some weak part, to aid nature in restoring herself to health and vigor. A cathartic, taken into the stomach of a very sensitive individual, will produce the result of an emetic; and an emetic, too.

long in effecting its end in the first stomach, will, after passing the duodenum, produce the result of a cathartic in the second stomach.

I have now said all that is necessary in relation to the curing of diseases by the ELECTRO-NERVOUS FORCE, and have clearly shown how this force can be made to act by mind, or by medicine. I will now give advice in relation to avoiding disease and preserving health, which it will be well for every one to observe who is desirous of securing this inestimable blessing. As life is dear to all, I shall be pardoned when I say that medical gentlemen are mad who administer medicine in silence to the patient without candidly informing him what the medicine is, and what effect or effects he intends it to produce. If the patient were thus instructed by a physician in whom he had full confidence, then he would be in constant expectation of the anticipated effect; and the mind, by its mental impressions, acting in concert with the physical impressions of the medicine, would produce a salutary and happy result. I grant that this information cannot be given to infants, nor to deranged persons; but it should be done in all possible cases.

In order to preserve health, *the body should be kept clean, and the mind pure and calm.* There are extremes in every thing, and these should be carefully avoided. The body should be carefully washed all over, or bathed, except the head, in water moderately

cool. No soap should be used in either case, and the process should not occupy more than *three or four* minutes. It should be briskly rubbed with a coarse towel, and mostly downward, so as not to disturb the minute scales that cover the pores. In cold weather, colder water should be used than in moderate weather. Indeed, the water should be about the temperature of the elements. But in freezing weather the body should be merely immersed, and almost immediately extricated, and the washing process should not occupy more than a moment of time. In cold weather, twice per week is sufficient; and in warm weather, every alternate day is abundant, in ordinary cases. Too frequent washings and bathings, and of too long continuance, to persons in ordinary health, is deleterious, as it destroys too much of the natural oil of the skin, which the Creator has supplied to give it a soft and silky texture. The system of hydropathy has great force, if rightly managed. In cases of heat, or inflammation, warm water should be applied, and the reaction would be coolness; and in cases of cold feet, they should be washed on going to bed each night in cold water, till they remain continually warm. The coldest water will extract the frost from a frozen hand, whereas if it were immersed in the warmest water that could be borne, it would perhaps destroy it, so as to render even amputation necessary. But if the hand be burned or scalded, immersing it in the warmest water that can be

borne, or holding it to the fire, will produce a salutary result, even though the remedy be a harsh one. On this principle, you see the inconsistency of cold water applications, and even of ice to the head in brain fevers, or where there is a severe inflammation of the brain, occasioned by a fall, a blow, or any concussion.

I now turn the attention of ladies and gentlemen to eating, drinking, and wearing apparel, and will endeavor, in few words as possible, to show the bearing of these upon the human constitution.

Our bodies are made up of the elements, and, as I have already observed, are an epitome of the universe. In order to insure perfect health, we should subsist entirely upon the provisions, whether vegetable or animal, that are produced in that part of the earth where we were born and reared, or in that part of the earth where we intend to spend our days. And, moreover, our wearing apparel should also be the product of the same section where we live. Cotton should never be worn where the snow covers the earth, or in that part of the earth's latitude where it cannot be raised. Hemp, flax, cotton, wool, and silk may be worn with perfect safety in those latitudes of the earth's surface where they can be cultivated. The Creator's works are perfect. He has established complete harmony between the vegetables, and the soil where they grow, and the climate that fostered their existence and warmed them into life. He, therefore, who eats the food belonging to his own

latitude, who drinks the water that gushes from his own springs, and wears the clothing produced in his own climate, establishes a perfect harmony and aptitude between his own body and the surrounding elements. I mean that he does this in case he uses these blessings temperately, as not abusing them.

The truth of this will appear perfectly clear, if we have a correct understanding of inuring ourselves to another climate, entirely different from the one to which we have been accustomed. I will therefore call your attention to the PHILOSOPHY OF BECOMING ACCLIMATED.

The mineral kingdom lays a foundation for the vegetable, and the vegetable for the animal kingdom. It is therefore perfectly clear that no animals could have had an existence till there were vegetables, because an *animal* is but a *vegetable* of the *second* growth. Each latitude of the globe has vegetables peculiar to itself, and these make up all the varieties that exist on earth. But the same species of vegetables differ from each other in different latitudes, as far as the climates and elements or soils may differ from each other. An apple, pear, or peach, grown in forty degrees north latitude, differs considerably from the same fruit raised in thirty degrees north latitude. This is certain, because it is the result of surrounding elements that gave it being. The same may be said of corn, wheat, and rye in different latitudes. And as animals are but

vegetables of the second growth, hence the same animals vary in accordance with their latitudes. The beef, mutton, and pork, raised in thirty and forty degrees north latitude, are therefore unlike, each being adapted to its own climate and the vegetables that sustained them.

I have already stated, that our bodies are made of the water, the vegetables, and animals upon which we subsist, and are adapted to the climate and surrounding elements where we were born and reared. Our bodies are continually wasting away, and by food and drink are continually repaired. We lose the fleshy particles of our bodies about once a year, and the bones in about seven years. Hence in seven years we have possessed seven bodies of flesh and blood, and one frame of bones. We have not now, in all probability, a particle of flesh and bones we had seven years ago. The water we have drank, and the flesh and vegetables we have eaten, having made up the component parts of our bodies, cause us to hanker and long for the same substances of which our bodies are composed. Like substance in us calls for like substance without, to supply the waste of the system. This is habitude.

Now suppose we suddenly change our climate from forty to thirty degrees north latitude. The air, water, fruits, vegetables, and flesh all differ. The old particles composing our bodies, and brought from forty degrees north latitude, fly off as usual. This produces

hunger and thirst, and we supply our wants by the water and food of thirty degrees north latitude, and continue for weeks to do so. This creates a conflict between the old substances of our bodies and the new flesh and blood continually forming, throws the electro-nervous force out of balance, and engenders disease. If we live and struggle on, for about seven years, we become ACCLIMATED, because our old flesh and bones, formed by the substances of one latitude, have disappeared, and our entire systems are made up of the substances of another latitude. Hence we see the danger of changing our positions on the globe to any great extent, which may, however, in some instances, prove beneficial to the constitution. Such is the PHILOSOPHY of being ACCLIMATED.

In view of what I have now brought forward, it will be clearly perceived, by ladies and gentlemen, that we should confine ourselves to the water, fruits, grains, and animal food, and even to the medicines produced in that climate where we live, and reject those of distant latitudes and foreign climates. To drink tea and coffee, and eat oranges, lemons, citrons, pineapples and the productions of all parts of the globe, is like changing, in some measure, our climate for another, or for several others, and thus keeping up a continuous conflict between the elementary particles that are constantly entering the composition of our bodies. There is an incessant war waged between the climate wher

~~the~~ live; and the productions of another region, and ~~those of~~ our own. To all this, add the clothing of ~~other~~ distant climes to be worn by us, and who can ~~wonder~~ that almost every man, woman, and child is complaining of some indisposition, or else groaning under disease and pain? Abandon luxuries of foreign growth; avoid dissipation; keep your bodies clean; your minds calm and contented; eat the productions of your own climate; drink the clear crystal water of your own spring; wear the flax, hemp, cotton, or wool that is raised in your own latitude; take all the rest of sleep that your nature and temperament require; have your hours of study, labor, exercise, and serious contemplation all regulated; and be temperate in all things. Follow these directions, and no doctor will enter your house. If you must have tea, use sage, pennyroyal, and hemlock. These are wholesome, and habit will transform them into luxuries far transcending the nerve-destroying plant of China.

It is impossible that the Creator could have erred in adapting all the fruits, grains, and other vegetable substances to each latitude of the earth, so that man and other creatures can subsist there in health, peace, and happiness. And man no more requires the products of other climes to increase these blessings, than the animals around him, who find not only their food and drink, but even their medicines produced by the soil on which they tread, without resorting to foreign

importations. At the novelty of these ideas you may smile, but they are based upon immutable truth, and established, constituted, and sustained by HIM who founded the pillars of strength and beauty that support the fabric of nature, and must stand till they shall fall.

LECTURE VI.

LADIES AND GENTLEMEN :

THE nature and importance of Electrical Psychology I have clearly and philosophically argued, in a free, unchained, and fearless expression of my thoughts. For this, even if I have erred, I am entitled to your approbation, rather than your condemnation. For what is man, when he makes himself a cowering, cringing slave to the opinions of others, and tamely bows to win the momentary smiles of popular applause from the passing crowd? What I have said in relation to this science, has been the sincere breathings of my own convictions. I have, therefore, reasoned fearless of consequences ; and if I have in so doing met your approbation, I rejoice at it ; if I have met your disapprobation, I regret it—yet you will pardon me when I say that I cannot alter my course and accommodate myself to the opinions of others, however elevated may be their stations. Fully sensible of the duty I owe to my fellow-men, and to the Supreme Ruler of the universe, and when I discharge this to the best of my ability, I little care what men may think or even say of me.

If, however, what I have argued of the human system—the electro-nervous force—the connecting link between mind and matter—the circulation of the blood—the philosophy of disease—the rationale of its cure—the laws of health, and the philosophy of being acclimated—if these excite your surprise, ladies and gentlemen may then prepare themselves for still greater surprise in the arguments now to be offered on spirit, and the creation and government of the universe. Being myself perfectly unshackled and free, I shall exert myself in that freedom while pursuing this department of my subject.

In my introductory remarks in my THIRD Lecture, I took a general survey of the powers and operations of electricity throughout the empire of nature. We saw its secret workings, and its alternately sublime or awful manifestations. But all these operations and convulsions, however magnificently grand, will appear but as the drop of the bucket to the fountain, when compared with the UNSEEN POWER that stirs the universe. Electricity, so swift in its movement as to rival the lightning glance of thought, and so inconceivably awful in its rending force as to convulse the globe to its centre, is yet as nothing, and less than nothing, compared with that Eternal One who arms it with power—who gives it all its expansive force, and who makes it the messenger of his attributes to both nature and man. With his finger he has written the truth of this science

on every object throughout the realms of nature. It is written in the beams of the mid-day sun—in the descending rains and gentle dews. It is written in the flowery field and shady grove. It is written in stars on the scroll of night. It is written in lightning on the bosom of the dark cloud. It is written deep in sympathy on the soul, and controls the most powerful affections and stormy passions of the human heart.

In this Lecture I will turn your attention to SPIRIT, or MIND—by which I mean one and the same thing—and will endeavor to prove the existence of an Infinite Spirit.

Though the powers of mind and its complicated operations can be seen, felt, and in a good degree comprehended, yet, after all, we know but little of mind as it regards its *properties*, or *substance*. Some suppose it to be absolutely and positively *immaterial*, because it is purely spirit. Others believe *mind* to be the result of organism, and contend that it cannot exist without a brain, which is the grand organ that secretes thought, even as the liver secretes its bile, or the stomach its gastric juice! The former of these suppositions is the one generally adopted by the Christian community who believe spirit to be an *immateriality*. The latter supposition is embraced by those Christians who wholly rely upon the resurrection of the body for the future existence of the spirit. They are called **Materialists**, because they make out the spirit to be no

substance at all, but merely the result of organized matter. Of this faith was the celebrated Dr. Priestley. This latter position is also adopted by the Atheists, who contend that spirit cannot exist independent of an organized brain ; and as they reject the Christian hope of the resurrection, so they contend that mind is extinguished in the night of the grave, and sleeps in non-entity, to wake no more. Hence the idea of a God, as an intelligent Spirit, they regard as a freak of fancy—a mere chimera of the human brain. Both of these positions as it regards spirit I reject, and will give my reasons for doing so.

I reject the *immateriality* of the spirit, because that which is positively and absolutely *immaterial* cannot of course possess either length, breadth, thickness, nor occupy any space. Indeed, it cannot, in this case, possess any form ; and that which possesses no form, cannot, in the nature of things, occupy any space. And to talk of a thing having an existence, which, at the same time, has no form, nor occupies space, is the most consummate nonsense. Hence an *immateriality* is a nonentity—a blank nothing. On the other hand, if *mind* is merely the result of organism, and if it cannot exist independent of an organized brain, then who made the first brain ? Did it not require an intelligent spirit to organize its several parts, and adapt the eye to light, the ear to sound, and make these organs the inlets of sensation to the inhabitant in that brain ?

Surely the brain did not make itself, for this would only be saying, that the brain acted before it existed!

Having given my reasons for rejecting both these ideas of *mind*, I am now ready to introduce the question, What is *MIND*? I answer, it is a substance—an element—as really so as air or water, but differs materially from all inert substances in being. I regard *mind* as living and embodied form—as that incomprehensible element whose *nature* it is to possess *life* and *motion*, as much so as it is the nature of other substances to possess inertia. Hence, mind is, in these two respects—namely, *life* and *motion*—directly the opposite of dead matter.

In the first place I will start with the assertion that there must be in the universe an Infinite Mind. It is impossible, in the very nature and constitution of things, that an absolute perfection of substances can be philosophically maintained without this admission. For the truth of this position I rely upon motion. By *MOTION*, then, I am to prove the existence of an Eternal Mind.

In the first place permit me to remark, that inherent motion is not an attribute common to all substances in nature. This globe, as a body, is moved by the *positive* and *negative* forces of electrical action. And all the operations of nature in the earth and elements are carried on by the same power. Whether it be *crystalizations*, or *petrifications*, the growth of *vege-*

tation, or its decomposition—motions and changes in air and water—or the crumbling particles of the mountain rock—all the motions, visible and invisible, that transpire in the mineral and vegetable kingdoms, and in all their multifarious operations, are produced by electricity, which is the universal agent appointed to keep up the order and harmony of the universe. And yet it is certain that electricity does not possess inherent motion as its attribute. Motion belongs to one substance only, and that is mind.

There is certainly as much order in the universe as there is in the human body. Let us, then, look truth calmly in the face. Each organ of the body performs but one function. The eye sees—the ear hears—the olfactories smell—the glands taste—the heart throbs to regulate the blood—the hands handle—the feet walk, and the liver secretes its bile. The eye never hears, and the ear never sees. So there is but **ONE SUBSTANCE** in nature whose attribute is inherent motion, and that is **MIND**. Not one single part of the human body possesses independent motion. Electricity is there also the grand agent to move the limbs and vitals, and the living mind is the only moving power.

The point upon which I am now entering is one of most deep and thrilling interest. It is no less than to prove the existence of an Eternal Mind from *motion and the absolute perfection of the chain of elementary*

~~substances.~~ But while accomplishing this, I must call to my aid the relative subtilties of different portions of ~~matter~~ with which we are surrounded. Let us, for a moment, turn our attention to a few of the most obvious substances in nature, and then glance at her absolute perfection as a whole. Let us carefully notice the gradation these substances occupy toward each other in their relation to motion, and then the intrinsic beauty of the subject will appear. I will begin at the heaviest matter that may first suggest itself to my mind, and leisurely pass on, rising higher and still higher, through its various grades, up to that which is more and more rarefied, subtile, and light, till we arrive at that which must necessarily possess inherent motion, and therefore living power.

The heaviest of gross substances in existence is the most difficult to move, and hence must be at the greatest possible distance from motion. Though there are several solid substances heavier than lead, yet I choose to begin at this, as the idea I wish to convey is all that is worthy of your consideration in the present argument. Lead, then, on account of the density of its particles, is difficult to move. Were it the heaviest substance in nature, it would take its position farther distant from motion than any other substance. Rock being more easily moved than lead, takes its relative position nearer to motion. In like manner earth is more easily moved than rock. Water is more easily

moved than earth. Air is more easily moved than water. The gaseous fluids are more easily moved than air, and electricity is more easily moved than the gaseous fluids.

It will now be perceived, by ladies and gentlemen, that as we mount the rounds of the ladder in the magnificent scale of material substances, there is a gradual approximation toward motion. Each substance as we rise, being more rarefied and light than the one below it, is of course nearer to motion than its grosser neighbor. And it will be perceived by every philosophic mind, that we cannot continually approximate motion without at last reaching motion, or that substance to which motion belongs.

We have now mounted from lead up to electricity; and though as we rose we found each successive substance more easily moved than the one below it, still we have not as yet found a single material that possesses inherent motion as its attribute. Lead, rock, earth, and water are moved by impulse. Air is moved by rarefaction, and electricity is moved by the positive and negative forces. True we have mounted up, as before remarked, to electricity, but even this cannot move, unless it is thrown out of balance in relation to quantity as to its *positive* and *negative* forces. In such cases it flies, equalizes itself, and again sinks to rest. *I am fully sensible that electricity is a fluid most inconceivably subtile, rarefied, and fine. It is computed to*

take four million particles of our air to make a speck as large as the smallest visible grain of sand, and yet electricity is more than seven hundred thousand times finer than air! It is almost unparticled matter, and is not only invisible, but, so far as we can judge, it is imponderable. It cannot be seen—it cannot be weighed! A thousand empty Leyden jars, capable of containing a gallon each, may be placed upon the nicest scale, and most accurately weighed. Then let these be filled with electricity, and, so far as human sagacity can determine, they will weigh no more. Hence to our perception, a thousand gallons weigh nothing.

As electricity, in regard to motion, stands upon the poise, being completely balanced by the positive and negative forces, that equalize each other, so it is easily perceived, that if we mount one step higher, we must come to that substance whose nature it is to move, and the result of that motion is thought and power. It is MIND. Hence it will be distinctly perceived, in view of the argument now offered, that we cannot, as philosophers, stop short of *motion* in the highest and most sublime substance in being. This conclusion, as the result of the argument, is absolutely and positively irresistible, and challenges refutation.

When we mount up in our contemplations through the various grades of matter, and see it continually brightening as we progress onward in our delightful career of rapture, till we arrive at that sublimated

substance which can neither be seen nor weighed—which moves with a velocity of twelve million miles per minute, and can travel around this globe in the eighth part of a second, we are struck with astonishment and awe! But as this is not the last link in the immeasurable chain, we are forced to proceed onward till we arrive at the finest, most sublime, and brilliant substance in being—a substance that possesses the attributes of inherent or self-motion and living power, and from which all other motion and power throughout the immeasurable universe are derived. This is the INFINITE MIND, and possesses embodied form. He is a living being. This Infinite Mind comes in contact with electricity, gives to it motion, arms it with power, and, through this mighty unseen agent, moves the universe, and carries on all the multifarious operations of nature, whether minute or grand. Hence there is not a motion that transpires amidst the immensity of his works, from rolling globes down to the falling leaf, but what originates in the ETERNAL MIND, and by Him is performed, through electricity as his agent. Mind is, therefore, the absolute perfection of all substances in being; and as it possesses self-motion as its grand attribute, so it is, in this respect, exactly the reverse of all other substances, which are, of themselves, motionless. MIND, or SPIRIT, is above all, and absolutely disposes of and controls all. Hence mind and its agent,

electricity, are both imponderable—are both invisible, and coeternal.

As the Eternal One wraps clouds and darkness round about him, and holds back the face of his throne, so many do not believe in his existence, because he is unseen, while all the visible objects of creation are to them so many realities. But the very position here assumed is an erroneous one. The very reverse of this is true. What is seen is not the reality, but is only the manifestation of the *unseen*, which is the reality. Let us carefully look at this point. There is an apple-tree; it is plainly seen; but is that tree the reality? No; but it is the result of an *invisible* cause, and that *unseen* cause is the reality. But what was it? I reply, that it was not even the seed, but the *life* of that seed was the reality; and that *unseen life* possessed the embodied form of that tree. All its shapes and colors were there. By coming in contact with the soil and moisture, in a proper temperature of climate, it was enabled to throw out its own invisible and living form. First, then, the life; next the seed in which it dwells; next the trunk of the tree appears. Then its limbs and branches—its buds, leaves, blossoms, and fruit again end in living beauty. It began in life, and in seed or life it ended. It performed an electric circle. The tree, then, is nothing more than a visible outshoot—an ultimate of an invisible substance, which is the reality.

All the powers and operations of nature are lodged in the unseen and finest portions of matter—they pass on through every grade, and end in the gross and heaviest parts. The unseen power that stirs the earthquake and convulses the globe is the *reality*. It passes through every grade of matter, and ends in rending the solid rocks and hurling cities in the vortex of ruin. The power that moves this globe in its orbit at the rate of sixty-eight thousand miles per hour, is an invisible agent, moved by omnipotent Power—for all operations and effects begin in the finest substance in being, which is the unseen cause, and therefore the reality. Hence it is the same in nature as in the human system, as I have already shown in my arguments on the philosophy of disease. The disease begins in the finest substance of the body—in the electricity of the nerves—passes on to the blood and flesh, and ends in the bones. There is, indeed, but one common mode of operation in nature and in man.

Ladies and Gentlemen—I desire now to turn your attention to one important point in relation to mind, which has been entirely overlooked by philosophers. I mean its *involuntary* powers. To speak of the *involuntary* powers of mind will certainly produce a singular impression on your hearts; and the strangeness of the idea may, perhaps, fill you with surprise. But strange as it may appear, it is nevertheless true that *mind* possesses the two grand attributes of *voluntary*

and, *involuntary* power. These two constitute the mind as a living being of embodied form. If mind make use of electricity as its agent, then it must possess the voluntary and involuntary powers to meet the positive and negative forces in electricity. If this be not so, then the Infinite Mind cannot be the Creator and Governor of the universe; because it is by his *voluntary* power that he creates a universe, but it is by his *involuntary* power that he sustains and governs it. Each of these powers, from a philosophical necessity, and from the very nature of his being, perform their own peculiar functions, and in perfect harmony preside over their own respective departments. It is the peculiar province of the voluntary power of the Infinite Mind to plan, arrange, dispose, and create worlds and their inhabitants, and it is the peculiar province of his involuntary power to govern and control these worlds and their inhabitants through the fixed laws of nature. Let us reason this point, and its consistency will appear.

In the first place—if the voluntary power of the Creator governed the universe, then no possible contingencies could happen—and nothing once commenced could ever perish prematurely. For instance: if God determined to create a human pair, and by his voluntary power commenced the work, they could not perish when his work was but partially accomplished. They are destined to come to maturity, invested with the

true lineaments of form—and destined to gaze upon each other as perfect specimens of living beauty. If not, then God in his voluntary and absolute determinations can be thwarted and disappointed.

The first male and female, at least, of each species, were produced, and the whole living chain of animated existence was placed upon this globe by the voluntary powers of God, without any previous parents from whom they received their being. They were not born, but created, for there is philosophically and strictly a very wide difference between being *created* and *born*. The *former* we call miracle, the *latter*, an order of nature. To produce a human pair without a previous father and mother, is not in the order or power of nature, for she never changes her mode of operation in the production of her animated existences.

The same is true in relation to the vegetable kingdom. The whole species of vegetable life was produced by the voluntary powers of God. In the order of nature there never was an acorn but what grew on an oak; and there never was an oak but what came from an acorn. Geology proves that there has been a period when there were no vegetables or animals on this globe. Which then was first—the acorn or the oak? If you reply that the acorn was first, then there was an acorn that did not grow on an oak. If you say that the oak was first, then there was an oak that did *not* come from an acorn. Whence then is the starting

point of creation, if there is no God? for nature cannot start herself, as this would only be saying that she acted before she existed. Whether the Creator, in the first place, produced by his voluntary powers the seeds or the plants, is of no consequence to my present purpose. It is enough to say, that they were brought into existence without any parent stock, and in performing this work there could be no uncertainty, nor could any thing perish prematurely, because it was under the voluntary powers of the Infinite Mind.

But after this globe was created, and the first link of every species of vegetable and animal life was moved into existence by the voluntary powers of the Creator, it then naturally and of philosophical necessity passed from the control of the *voluntary* powers to the control of the *involuntary* powers of the Infinite Mind, and by them to be governed through the established laws of nature. Here then casualties may naturally arise, but no where else under the government of the Supreme.

This view of mind removes the many difficulties and perplexities we encounter, when we contemplate the unchangeable character of the Creator in the government of the world. Millions of our race are continually perishing by premature birth! The eye was most skillfully organized and adapted to see light, but saw it not. The ear was formed—all its vocal chambers were arranged, and the whole adapted to the reverberations of sound, but it never heard. It had hands,

but they never handled—feet, but they never walked—lungs, but they never breathed—and a mouth, but it never spoke, nor tasted food.

Again—how many millions of our race die under ten years of age! And though they were constituted, and ripening for the enjoyment of the social and domestic affections, and the multiplication of their race, yet they were prematurely cut off, and left no progeny on earth. Now if these events are under the government of the voluntary powers of the Creator, would he not, I ask, be arrested in the execution of his voluntary will, and would not his designs fail of being accomplished? The conclusion is absolutely irresistible, for how can we judge of *designs* only as we see the adaptation of means to ends? If an eye and ear are formed, and adapted to light and sound, does not this prove the will and design of God, that the one shall see, and the other shall hear? It does. If then the infant prematurely dies and never sees an object, nor hears a sound, are not those two organs formed in vain, and are not the design and will of the Creator both frustrated? If the girl that died at ten years of age, and never bore nor nursed children—if it is admitted that she did not answer the full measure and end of her existence, in common with her sex, is not then the will of God rendered abortive, and do not his designs in *this case* fail? It must be so, if the government of

the world is under the voluntary powers of the Infinite Mind.

That this part of my subject may be understood, and its consistency clearly seen, I will endeavor to present it before you in a very plain and simple form. I will take for illustration the human mind in connection with this body. We have two distinct brains—the cerebrum, with its two hemispheres and six lobes, commencing at the frontal part of the skull, and occupying the greater portion of the cavity; and the cerebellum, which occupies the back portion of the skull. The spinal marrow, extending through the vertebræ, to the bottom of the trunk, is but the continuation of these two brains. From the spinal marrow branch out, as I have before stated, thirty-two pairs of nerves, embracing both the nerves of motion and those of sensation. From these again branch out others, and in thousands of ramifications carry out the full power of both brains into every part of the system.

The cerebrum is the great fountain of the voluntary nerves, through which the voluntary powers of the mind ever act. The cerebellum is the fountain of the involuntary nerves, through which the involuntary powers of the mind ever act. Though the voluntary and involuntary nerves from these two brains seem to blend in the spinal marrow, yet they preserve their distinct character, even to their final termination in the system, and execute the functions appertaining to

their own office in producing voluntary and involuntary motion. Such is the residence of the living mind, which seems to hold its throne in the medulla oblongata, at the fountain-head of the voluntary and involuntary nerves. From thence my mind, by its volitions, controls all the voluntary motions of my body, through the cerebrum. At will I move my hands in any possible direction I please to handle substances, and at will I move my feet to walk.

But over the throbbings of my heart, the ultimate heaving of my lungs, the circulation of my blood, and the digestion of food by the stomach, I have no voluntary control. Awake, asleep, at home, abroad, the heart continues its motions, and the functions of life are executed, whether I will it or not. These then receive their motions from the involuntary powers of my mind, acting through the cerebellum. That these are all moved by mind is certain—because, take the mind or spirit from the body, and all motions, whether voluntary or involuntary, instantly cease.

I will now make an application of this to the Infinite Mind, in creating and governing the universe. If, for instance, you make machinery of various kinds, these are your own creations, for they are made by the voluntary powers of your mind. If you cultivate the earth, and raise grain and the various vegetables, to sustain your existence, these again are your own creations, for they are produced by your voluntary

~~powers.~~ You prepare them, by various processes, for ~~your use~~—you cook and place them on the table. You ~~eat them~~, and thus far they are under your voluntary action. But the moment they are eaten, your creations are finished, and the whole, naturally and of philosophical necessity, passes beyond your direct volition, and is subjected to the involuntary powers of your mind. These now take charge of this new creation, and govern it in all its involuntary motions and revolutions, according to the fixed laws of the organized system.

In like manner the voluntary powers of Deity are unchangeably employed in planning, arranging, and creating new worlds, and systems of worlds, and peopling them with inhabitants. When the whole of any such system is finished, and all its laws established for the rolling of worlds, and for the operations of the mineral, vegetable, and animal kingdoms, the whole naturally passes, according to the principles of philosophical necessity, from the action and control of his voluntary, miraculous power, and submits itself to be governed through the fixed laws of the universe, by the involuntary powers of the same Infinite Mind. As the bare presence of the human mind in the brain causes the heart to throb and the functions of life to proceed, even when that mind is wrapped in sleep so profound, that not a thought is stirring in its voluntary department, so the bare presence and majesty of the

Infinite Mind, even if he should not exercise a thought, would cause all worlds to roll through immensity, cause all the operations of nature in the mineral, vegetable, and animal kingdoms to proceed on in ceaseless changes ; for these are under the control of the involuntary powers of the Deity, acting through the laws of the universe.

LECTURE VII.

LADIES AND GENTLEMEN :

IN my last Lecture the momentous question was presented for our consideration—Where is the starting point of all motion and power, whether voluntary or involuntary, in both nature and man? The transcendent importance of this question clothes it with the eloquence of its own splendor. I have humbly endeavored to answer it by showing that all motion and power originate in mind. And surely the idea that mind possesses the attribute of innate motion and living power, is both majestic and sublime. I have shown that mind has two grand forces. I mean its voluntary and involuntary powers, by which the world was created and is governed. I have proved the existence of the Infinite Mind from *motion and the absolute perfection of material existences*. I have shown that mind must be some substance, and not the result of organism, nor an absolute *immateriality*, which is but a *nonentity*.

I am well aware that thought, reason, and understanding are considered to be mind, and that these are

immaterial. But they are not mind, as I have clearly proved in my Lectures on the Philosophy of Mesmerism. Thought and reason are but the results of mind. What is it that thinks and reasons? It is the mind. Then mind is something distinct from these mental operations, which are only its effects. When the voluntary powers of the mind are stilled in sleep, reason and thought are gone. Hence if these are mind, then the mind is annihilated in sleep. But if we admit mind to be a substance, a living and spiritually organized being, then all is plain. Sleep stops its motion, and thought is gone. Remove that pressure, and release the mind, and instantly it resumes its inherent motion, and the result of that motion is thought and power. On this point I add no more, but refer you to my Lectures on Mesmerism to learn my views more fully.

I now turn your attention to the subject of creation. Entering upon this, I feel the incompetency of my feeble powers to do it justice. Like a drop to an ocean, or an atom to a universe, any possible representation of the intrinsic grandeur of this subject must fall so far short of its reality, as to render any attempt at an adequate description the unpardonable presumption of impotent folly. Yet, as we are endowed with reason, and as the inspiration of the Almighty hath given us understanding, so we are bound, by the very laws of our being, to extend our researches to the utmost

verge of our mental capacity. He who would curb the human intellect and say *this* or *that* is a subject with which we have no right to meddle, and into which we have no right to inquire, is not only recreant to duty as an intellectual and moral being, but betrays his own ignorance, and proves himself a scientific bigot. Give the mind full scope and sea-room—let it feel the deep stirrings of its own powers, and soar, if it can, into the light of eternity, and survey the very throne of God, and him who sitteth thereon; and, if possible, let it scan the secret energies of his creating fiat, and even examine the raw material out of which worlds were manufactured.

It is the most commonly received opinion in the Christian world, that God made all things out of nothing. It is true the inspired book does not say, or even hint this. It simply says—"In the beginning God created the heavens and the earth;" but it does not add the words—*out of nothing*. It is absolutely and philosophically impossible, in the very nature and constitution of things, that something can be made out of nothing. It implies, at the same time, a contradiction in terms. We cannot form even a notion in our imaginations how much of nothing it would take to make the least imaginable something. I am speaking of *nothing* in the strictest sense of the word. But using the word *nothing* in its common acceptation, we can easily perceive how all things could have been

made out of nothing. When all visible objects are removed from a room, we say *there is nothing in it—it is empty*. Yet we know that it is filled with air, because we continue to breathe. But if the air, by a force-pump, were removed from an air-tight room, we might, with much more propriety, say *there is nothing in it*; yet electricity would be there. If solid substances were therefore made out of air, in an empty room, we could say that they were made out of nothing, for the room, according to the usual mode of expression, had nothing in it. But admitting the air to have been extracted from the room, and nothing but electricity left, and if solid substances were produced from this ethereal and invisible fluid, we could with much more apparent consistency say, that they were made out of nothing. In this sense, I grant that all things were made out of nothing. Paul says—"The things that are seen were not made of things that do appear." Here he plainly states, that the substances *seen* were made of *invisible* substances, or such as did *not appear*—for by *things* he only means *substances*.

If, however, it be said, to *create* must mean to bring into existence something from nothing, I have only to say, that this is not so; for it says, "God created man out of the *dust* of the earth." Here he created him out of something—it was out of dust, and yet it was *creation*. The Hebrew word rendered *create*, more *strictly* means to gather together by concretion, or to

form by consolidation—but never can it mean to bring ~~something~~ into existence from absolutely and positively ~~nothing~~. I therefore contend that all things were made out of electricity, which is not only an invisible and imponderable substance, but is primeval and eternal matter. It contains the invisible and imponderable properties of all things in being. That this is electricity is certain, because there is no other substance with which the Infinite Mind could have come in direct contact, so as to have produced by his creating power the solid and visible substances that compose the globe. It is, as I have already proved, in my third and fourth Lectures, philosophically impossible for mind to come in direct contact with any substance in nature except electricity. Hence electricity contains the elementary principles of all things in being, and contains them in their original, invisible, and imponderable state.

There must be something eternal. God, duration, and space exist of philosophical necessity, and that space was eternally filled with primeval matter. When I say that they exist of necessity, I mean that the contrary of space and duration cannot possibly be conceived. If infinite space were filled with an infinite globe, it would be space filled. If that globe were struck out of existence, it would be space empty. Filled or empty, it would still be space. As space exists of necessity, it is absolutely and positively eternal, and

hence could never have been created nor changed. The same is true in relation to duration. Duration must have rolled on, even if there had been no revolutions of suns and worlds to mark its periods. The contrary cannot possibly be conceived. Hence duration and space both exist of philosophical necessity, and are absolutely eternal. Endless duration is the age of Jehovah, and space is the empire in which he dwells and reigns. This space was eternally filled with mind and invisible matter in its original state. They both exist of philosophical necessity.

Hence matter is eternal, because if there ever had been a period when there was nothing in existence as regards matter, then nothing would now have been, for nothing cannot create itself into something. The same is true in relation to mind. If there ever had been a period when there was no mind in existence, then mind could now have been, for mind could not have been created itself, as this would be admitting mind to have acted before it existed. Hence mind and prime matter are both coexistent and coeternal. Indeed, one could not exist without the other, because electricity, which is original and eternal matter, is the body of God. All other bodies are therefore emanations from his body, and all other spirits are emanations from his spirit. Hence all things are of God. *He has poured himself throughout all his works. He has poured spirit from spirit's awful fountain.*

dled into existence a world of rationals. On this principle it will be seen, that the Eternal Mind is not absolutely omnipresent, while his electrical body is, because it pervades immensity of space. Mind must be enthroned, and not diffused over the whole body. And as the mind of Jehovah actuates his body, so he produces impressions throughout the boundlessness of space, and makes himself instantly felt throughout the immensity of his works, even as the human mind, which is located in the brain, still makes its presence felt throughout the body, even to every possible extremity, and produces the impressions of its existence on others.

Mind or spirit is of itself embodied and living form. It is spiritual organism in absolute perfection, and from mind itself all form and beauty emanate. The body of man is but an outshoot or manifestation of his mind. If I may be indulged the expression, it is the ultimate of his mind. Hence every creature in existence has a body which is the shape of its mind, admitting that the physical laws of the system were not interrupted in producing the natural form of the body from mind. The serpent is all length—is all concentration, and no wonder that he can charm the bird and other creatures around him. What a singular mind the lobster must have, for he has a singular body!

We touch the finger to any substance, and in the finger we appear to feel it. But this is not so, because *all feeling is in the mind*. If we amputate the arm or

leg, yet the fingers and toes as usual can be felt. For instance, we move a finger or wield the arm. How is this done? I answer this question by saying, that the mind has its spiritual fingers, arms, limbs, and all its lineaments of form corresponding to those of the body. The mind holds its throne in the brain, and possessing in itself the power of feeling and motion, it merely stirs its spiritual fingers, or wields its spiritual arm, and through the electric action of the nerves, which are laid, like so many telegraphic wires, between the two, the natural finger and the natural arm are compelled to make an exactly correspondent motion. This solves the mystery why the man who has his arm amputated, even up to the shoulder, yet feels his arm and his fingers as long as he lives, and often feels in them an itching sensation, or even pain, and that, too, at the same distance from his body which the fingers and arm occupied before amputation took place. All operations, convulsions, and motions begin in the unseen substance of the body, and end in its gross and solid parts. These are last moved, and last affected. This is not only so in muscular motion, but throughout nature.

Having the great principles of mind and matter before us, I will now proceed to notice the creation of worlds. I have already remarked, that all the chemical properties of all substances in existence, belonging to our globe and its surrounding elements, were made out of electricity. Hence electricity contains all the

elementary principles of all things in being. The ancients supposed there to be but four elements—namely, *earth, air, fire, and water*. It so happens, however, that *heat* is no element at all, any more than *cold*. It is merely an effect of substances in motion, produced by their friction. Though the ancients supposed there to be but four elements, yet as the science of chemistry advances onward toward perfection, more elements are detected. I believe that about forty have been already discovered, yet we have no reason to believe that even these are all. I will suppose, however, that there are one hundred elements belonging to this globe. Then there are one hundred elements in electricity, out of which this globe was created. We will step back in our imaginations to that period when this globe, as such, had no existence. For the sake of perspicuity, we will suppose one hundred cords to be fastened on those one hundred elements in electricity. Please to bear this fact in mind.

Now, as the Eternal Mind can come in direct contact with electricity only, so he exerted his voluntary powers that constitute his creative energy, and condensed those one hundred elements that constitute electricity, down to a more gross and dense state, each element sliding down its own cord in its progress toward creation. Though mind can directly touch nothing but electricity, yet electricity, as the universal agent under Deity, *can touch all substances in being*. The Creator

again acts, through another volume of electricity, upon those one hundred partially condensed elements, and moves them down a grade farther onward toward their ultimate, or created state. And thus the work progresses; wave successively following wave down its own cord, till they all become air. Hence air contains the one hundred elements; and all the chemical properties of all things in being are involved in it. And so the work of creation progresses, under the never-ceasing action of the Infinite Mind, from whom all motion and power emanate, till those one hundred elements are made into water. Hence water contains all the chemical properties of all things in being. Matter, from its invisible electric state, has now become visible in the crystal, volatile, and colorless state called water. The whole one hundred elements are here in solution; and from water, which is the universal solvent of nature, earth, and all mineral and crystalized substances were made. Boyle has proved, that by transmutation, as he terms it, nature turns water into earth; and Bishop Watson, in his "Chemical Essays," admits the same, and says, "it has never been disproved by any writer." Boyle should not have said that *nature*, by transmutation, does this; but that the CREATOR, by his own power of inherent motion, turns water into earth. I resume this interesting subject.

The one hundred elements, having reached the lower extremity of the one hundred cords, have now attained

their ultimate created condition and form, and the finished globe, in all its youth, beauty, and variety, appears. At the top of those cords are the one hundred elements in their original electrical state, resting in their own invisibility; and as we descend we see the continual change each successive wave passed through, as the whole one hundred substances were, under the action of the Creator, gradually approaching their created state, till at length they emerged from invisibility and chaotic night into the light of day, and rendered the variegated beauties of their created forms visible to the eye of the beholder.

The globe being finished, it required electricity, the original substance out of which it was made, to be brought upon it by the Creator, so that his infinite mind, through this agent, might come in contact with it, in order to move and govern it, not only in its revolutions by the attractive and repulsive forces, but in producing all the changes and operations in its mineral, vegetable, and animal kingdoms. As this great work is submitted to the involuntary powers of the Infinite Mind, and as mind cannot come in direct contact with gross matter, so the beauty and simplicity of the subject appear in the grandeur of the idea, that electricity, being uncreated and eternal matter, is the only substance that mind can touch, and hence is the great physical agent the Creator employs in the government of all worlds. The unchanging laws of the universe

are but the unchanging thoughts of God. Ladies and gentlemen, I desire you to bear in mind that it requires electricity, the very substance out of which the globe was made, to govern it by its positive and negative forces under the energy of Infinite Power.

As this subject is somewhat intricate, permit me to be very explicit in making myself understood. When I say that it requires electricity to govern the globe, I mean as follows: Electricity, being the uncreated substance, is the *positive* force, and the globe, being the created substance, is the *negative* force. In the next place it will be clearly perceived, that all the substances existing in the globe as so many *ULTIMATES*, exist in electricity as so many *PRIMATES*. For instance: If there is gold in the globe, then there is gold in electricity, out of which it was made. If there is phosphate of lime in the globe, out of which the shells of the ocean and bones are formed, then there is phosphate of lime in electricity, out of which it was made. The gold in electricity is in a gaseous and invisible state, and is the *positive* force, and the gold in the globe is in a solid and visible state, and is the *negative* force. As the positive and negative forces always come together, so the gold in electricity entirely controls and mineralizes the gold in the globe, but lets its ninety-nine kindred elements alone. Each one keeps its own cord of communication from top to bottom—from *primate* to *ultimate*—from positive to negative.

The same is true, not only of the gold, and of the phosphate of lime, but also of the ninety-eight remaining elements. The whole one hundred elements in electricity, as the *positive* forces, are brought to act upon the one hundred corresponding elements of the globe, as the *negative* forces, and thus not only move it on its axis, and in its revolutions around the sun, but produce all the changes and operations in these elementary substances of which the globe is composed.

These ideas of the creation and government of the world are in reality sublime. And when we reflect that the Infinite Mind comes in contact with electricity, and, through that eternal, invisible agent, governs all worlds by his involuntary powers, sublimity rises into infinite magnificence, and overwhelms the soul with awe!

The sun being pure electricity is, of course, a cold, invisible body. He is placed, as is supposed, in the centre of a retinue of worlds composing our planetary system, and that to these worlds he gives light, heat, and vegetation. But to my mind it is evident that there can be no light above our atmosphere which surrounds the globe to the height of about fifty miles. As electricity travels from the sun to the globe in never-ceasing streams, so when it strikes the top of our atmosphere it becomes faintly visible, and not before. This is proved by the morning and evening twilight, when the sun is so far below the eastern hills as to

strike the very top of our atmosphere, apparently on a level with our fields, and affords a feeble light on account of the thinness of our air at that height. But as it rises higher, its rays shoot deeper, and the air growing denser as they approach the earth where we stand, till they touch it, the friction on the particles of air is of course greater, and the light and heat are rendered more intense by this density of atmosphere, and by their final reflection and reaction from the globe. Hence could we rise to the top of our atmosphere, the sun would disappear, and we should there be shrouded in total darkness. Electricity is cold and invisible, and as it travels from the sun to the globe at the rate of twelve million miles per minute, so it sets the particles of the air on fire by the rapidity of its motion and friction. Such is the philosophy of the morning and evening twilight, which never has been, and cannot be explained on any other principle than the electrical invisibility of our sun, and the absence of all light above our atmosphere. And electricity, thrown from the sun to the globe, is the mode employed by the Creator to bring it to its full growth and perfection, as a meet habitation for man.

As electricity is, in its one hundred elements, continually pouring from the sun upon the globe, why does it not continue to increase it in bulk? I reply that it does, and hence its entire creation, as to its size, vegetables, and animals, is not yet perfected, but will be in

future ages. Its distance from the sun, and its exact relation to surrounding worlds, will then forbid its increase in bulk. The human body, when completely developed by food and drink, ceases its growth, even though the same sustenance, both in quality and quantity, is continued. This I will more fully explain, and hence the cause of the variation of the compass, which in philosophy yet remains inscrutable, will be made to appear.

Comets are declared by Newton and others to be melted globes, and he computed the heat of one to be several thousand times hotter than that of red-hot iron, and that it would take a comet the size of this globe, fifty thousand years to cool to its centre. Comets move in very elliptical orbits, and are deemed, on this account, to be very eccentric bodies. The cause of this is, that while they are chained by the attractive and repulsive forces to keep a circle, yet as they are propelled in a straight line, sky-rocket-like, by their own internal gaseous flames that stream in their course, so their orbits are elliptical. As they cool, their own internal force is lessened, and their orbits become more circular, because there is less trespassing on the attractive and repulsive forces, which, if left to their own operation, independent of foreign influences, would move all worlds in perfect circles. Immensity of space is not square, for then worlds would move in a square, but it is round, if I may be indulged in the expression in regard to that

boundless field, "whose centre is everywhere, and its circumference nowhere." Electricity, uninfluenced, always moves in circles.

The globe yet moves in an elliptical orbit, because its bowels are melted lava, and perhaps not more than one hundred miles in depth of its crust are as yet cooled. And the two hundred volcanoes now in existence, are so many spiracles to the subterranean furnace, and continually throw off the gaseous substances generated in its bosom, and cause it to transgress in some measure the attractive and repulsive forces that move it. As it cools, it continually approximates, in its orbit, nearer to a circle. This will cause the variation of the compass to continue, till its own internal forces cease to affect its motion, and allow the law of attraction and repulsion to move it in a perfect circle around the sun. And when it shall perform an exact circle in its annual revolution, it will be perfectly finished as to its size, and yet the quantity of electricity thrown upon it from the sun, will be the same as it now is, and ever has been. But this redundancy will be thrown off at its north and south poles, and in such increased quantities as to warm and enlighten those extremities of the globe, and bring them into the fruitfulness and bloom of the garden of Eden. Then the variation of the compass will cease, inasmuch as the cause will be removed that produces it. The cause of its variation is the elliptical orbit in which our globe moves, and its continual and

unceasing approach to a circle. And when that circle shall be obtained, the globe will be finished, and the variation of the compass will disappear.

The globe is yet in its infancy—yes, in the embryo of its being—and it will require many thousand years to finish it. And this must be done, because under the voluntary powers of the Creator, nothing can perish prematurely. Many species of vegetables and animals now in existence, will become extinct, and disappear from the page of the naturalist, and others of a more improved and superior character will be awakened into being. They will be perfectly adapted to the future and ultimate perfection that this globe, under the energies of the Infinite Mind, is destined to attain. Its creation will then be perfected. The soil upon which we *now* stand, will *then* be some deep stratum in its crust, containing our present vegetables and animals in a state of petrification. These will be pronounced, by coming generations, the strange nondescript remains of past centuries, and afford to the future geologist and naturalist abundant materials for their loftiest speculations. This subject, in connection with the boundlessness of the universe, and the successive creation of worlds, I should like to pursue to a greater extent, but lest I weary your patience, I bring my present Lecture to a close.

LECTURE VIII.

LADIES AND GENTLEMEN :

THE query may perhaps now arise in your minds, What bearing has the subject of the creation of this globe, and the original materials out of which it was made, advanced in the last Lecture, upon the science of Electrical Psychology? The answer to this query will be fully made to appear in the arguments I have to offer on the present occasion. I have already stated in my third Lecture, that man is an epitome of the universe, and that the chemical properties of all the various substances in existence are congregated in him, and form and constitute the very elements of his being. I have stated, that in the composition of this body are involved all the mineral and vegetable substances of this globe, even from the grossest and heaviest matter up to the most rarefied and light. And *lastly*, to finish this masterpiece of creation, I stated that the brain was invested with a living spirit, that, like an enthroned deity, presides over, and governs, through electricity as its agent, all the voluntary motions of this little, organized, corporeal universe; while its living presence

and involuntary self-moving powers, cause all the involuntary functions of life to proceed in their destined course. Hence human beings, and all animated existences, are subject to the same common electrical law that pervades the universe, and moves all worlds under the superintendence of the involuntary powers of the Infinite Spirit.

That all substances are incorporated in the body of man is irresistibly true, otherwise he could not inure himself to all, even to the most deadly poisons, and render them, in a good degree, harmless in his system. He may so accustom himself to the use of tobacco, rum, or even opium, that he can take into the stomach a quantity sufficient to produce the death of several individuals, while he himself will experience from it but a slight effect. He may even commence the use of arsenic in small quantities, gradually increasing the dose, till he gets incorporated into his system a sufficient quantity to kill, for instance, five men. As in this case it forms a part of his body, so it causes a longing for it in proportion to the quantity in the system. Should he now take a portion sufficient to kill five men, it would only produce a balance of power with that already in his system. It would meet the demand. This is habitude. But should he take one portion more, sufficient to kill any other man, he would die. Now it would be impossible for a man to inure himself to any such substances, unless there were some

small particle in the composition of his body on which to build. Hence it is philosophically true, that man is an epitome of the universe, and that all the elements, in exact proportions, are most skillfully combined in his system, by the hand of the Creator; and these proportions should never be disturbed and thrown out of balance by dissipation.

Having these facts distinctly before us, I would now state, that if there are one hundred elements in the globe which was made out of the same number in electricity, then there are one hundred in the composition of man's body, for he is but an epitome of the universe. As his body was created out of the dust of the earth, and is but a vegetable of the second growth, so it is the same as though it had been originally made out of electricity. And as the globe, after its creation, required electricity, the original substance from whence, under Deity, it sprung, to move, control, and govern it, so, after man was organized, and his brain invested with a living spirit, it required electricity, the primeval substance out of which he was made, to be inhaled with the air into his lungs, and carried to every part of his system, and by which, under the impulse of mind, it must be moved, controlled, and governed by the positive and negative forces that move all worlds. You now perceive what connection Electrical Psychology has with the creation of our globe. It is a science that in-

volves the electrical theory of the universe, and all the multifarious operations of nature.

..a) We know not, as yet, how many elements there may be in existence. I desire it, however, to be distinctly borne in mind, that if there are one hundred in electricity, which is primal and eternal matter, then there are one hundred in the globe, one hundred in the vegetables that the globe produces, and one hundred in the human body, which is sustained by, and, therefore, made up of vegetables. The stomach is the great workshop of the system, to manufacture new materials to supply the demand occasioned by its constant wastes. The food and water taken into the stomach contain the one hundred elements to meet the supply of the one hundred that are contained in the composition of the body. Electricity, containing also one hundred, is inspired by the lungs, communicated to the blood, from the blood to the nerves, and conducted to the brain, and there laid up for the use of the mind, as I have explained in my THIRD LECTURE. This electricity is sent by the involuntary powers of the mind from the cerebellum through the pneumogastric and other involuntary nerves to the stomach, to produce digestion. The one hundred elements in electricity meet the one hundred corresponding elements in the food, and convert the whole mass into one homogeneous chyle. This is done by the positive and negative forces, without the *least confusion* or interference of one element with its

kindred elements. The nutritious parts of this chyle are taken up by the absorbents, and, in the form of serum, are thrown into the circulating system, and transmuted into blood. The blood is the universal solvent of the system, containing, in solution, all the chemical properties that are to constitute the body, even from its finest particles down to the solid bones—the same as water is the universal solvent of nature, out of which all the constituent principles of this globe are formed, through electrical action.

The finest particles of the blood are taken up, and, by the positive and negative forces of electricity, are transmuted into flesh, tendons, bones, and all the substances that constitute the animal economy, and by the same forces the old particles of the body are thrown off, to mingle again with those of the globe. When I say that all this is effected by the one hundred electrical elements, each acting upon its own element in the food, without interfering with any of its ninety-nine kindred elements, I desire to be distinctly understood. In order to express clearly so intricate an idea, I will take one of these elements, and carry it through in all its principal bearings.

Phosphate of lime is the substance that forms our bones. It may not be a simple element, but in order to convey my ideas on this point, I will consider it so. As our bones are continually wasting away, so this waste must be supplied; and as they are often frac-

tured, so they require new particles to reunite them by ossification. Hence there must be phosphate of lime in our food as well as in electricity. This is certain, because that hard, bony-like substance collected on the teeth in the act of mastication, is from the phosphate of lime in our food and water. Having these facts before us, I now turn to the point under consideration, and ask your undivided attention.

The food is taken into the stomach. The phosphate of lime in electricity being the *positive* force, moves from the brain—from the cerebellum—through the involuntary nerves to the stomach. It takes hold of the phosphate of lime in the food, which is the *negative* force, and leaves the other ninety-nine elements of the food unmolested. This is perfectly philosophical, for the *positive* and *negative* invariably rush together. It converts this phosphate of lime into chyle, and takes it up through the absorbents, and transmutes it into serum and blood. This phosphate of lime from the food now forms a constituent part of the blood. In the next place, the phosphate of lime in electricity takes hold of the phosphate of lime in the blood, and moves it on through all its destined avenues till it reaches the liver, which, while it secretes the bile, seems to act as the bolter of the system, to separate these one hundred elements to be distributed to their destined, correspondent parts of the body. The phosphate of lime in electricity *extracts the like* substance from the blood at the liver,

conveys it to the various bones of the body, transmutes it into an osseous substance, and lays it down, particle after particle, and thus forms anew the solid framework of the system, while the dregs are passed off through the urinary secretions. But before it lays down the *new*, it removes the *old particle* by its repulsive force, and compels it to fly off by insensible perspiration. Fully sensible that I am now understood in reference to the operation of this one element, I am satisfied that you understand me also in relation to the operations of the other ninety-and-nine, in carrying on the work of digestion to keep up the repairs of the body.

These ideas, though somewhat intricate, are nevertheless interesting and sublime, as they unfold the relation in which man stands to the globe, to surrounding worlds and his Creator, as an epitome of the universe. If their novelty produce surprise in any breast, yet this is no reason that they should awaken resentment, or kindle indignation against the speaker. We are finite beings, can know but little, and we should ever be ready and willing to freely express our thoughts reciprocally to each other, independent of the opposition of men. By this mutual interchange of sentiment and feeling we should increase in knowledge, and grow wiser and better. Indeed, we need not go, in our contemplations, out of ourselves to learn the great principles and operations of both mind and mat-

ter, of God and his works. As it regards human research, the words of the poet are unchangeably true, and must stand unshaken when thrones and kingdoms fall. He immortalized his verse when he breathed out,

“The proper study of mankind is MAN.”

I now turn to another department of my subject, equally interesting. I mean the DOCTRINE OF IMPRESSIONS, by which both nature and man are thrown out of balance, made sick and cured. In this also we shall see the relation between man and nature.

The philosophy of disease I have briefly, but faithfully argued in my FOURTH LECTURE, and shown how it may be produced by both mental and physical impressions. Hence there is no occasion that I should weary your attention by ranging that field of pestilence and death. I shall confine my observations principally to nature, and even in these I shall be brief. The law of EQUILIBRIUM is the grand central LAW of the universe. It holds over nature the reins of government, and allows her, in her operations and changes, to stray, but not too far, from the central track. She may rise above, or fall below this law, but to its mandate she must ever bow, and at stated periods resume her medium course.

Electricity, being a universal agent, produces all the phenomena and changes that transpire in our globe and its surrounding elements. By heat, which is an

electrical effect, the air is rarefied and water is evaporated. When the rarefaction of the air is carried to an extreme, then that portion of the earth and its inhabitants suffer. Nature is diseased, and the denser portion of the atmosphere is, at length, aroused from its slumberings and armed with force. The sweeping hurricane rushes, or the dreadful tornado roars in its awful movement to fill up, and rescue that rarefied and diseased portion of the air, and continues its force till an equilibrium is attained in her aerial realms. At this point all action ceases, and nature is well. She was cured by her own impressions.

In like manner evaporation may continue till the air is filled, in its upper regions, with vapors. As electricity has a strong affinity for moisture, it leaves the drier portions of the atmosphere near the earth; and ascends to the moist and vapory regions above. By this process electricity is thrown out of balance. The man who has had a broken bone, even years ago, or who is subject to rheumatism, will feel an inconvenience in that spot, or in his system, as harbingers of the approaching storm. The cause of this is, that he does not inspire as much electricity as usual with the air into the lungs, and feels the inconvenience. And the storm will surely burst, if there are no upper currents of air to disperse the vapor. The electricity *being* thrown out of balance condenses the vapors into *thick clouds* by its coldness, and thus darkens the

heavens. The lightnings flash, the thunders roll, the rains descend, and the war of elements will continue till that subtle fluid is equally dispersed throughout the atmosphere. Nature having gained her equilibrium, in her electrical realms, is at rest. By these awful impressions of her voice she is cured. Here it is distinctly perceived that electricity is a cold body, because it condenses the storm, and when its quantity is sufficiently great it produces hail, even in the warmest weather in our southern climates. In these few ideas we see also the philosophy of storms.

Even the globe may be sick. She may have a bowel complaint. By the confined air and continually generating gases in the lava contained in her bowels she is thrown out of balance. The earthquake awakes from slumber, and springs from its dreadful couch. It starts to discharge its force at the nearest volcano. In its fearful march it sounds its rumbling thunders and convulses the globe. Flames start up through fissures of the opening earth, and from the bottom of the ocean burning islands arise! Volcanoes bellow and disembogue. Their lava overwhelms devoted cities, and their shock hurls others in crumbling ruins! A reaction takes place, an equilibrium is produced in her subterranean realms, and she is well. By these awful impressions of her own power she is cured.

I might extend my observations to every visible department of nature, and notice her more minute opera-

tions, but these few remarks, in reference to her most stupendous and obvious convulsions, are sufficient to give you my ideas how she becomes diseased by being thrown out of her equilibrium, and how she is cured by the inherent force of her own impressions. As man, then, is an epitome of the universe, the full force of my arguments on the philosophy of disease and the rationale of its cure, advanced in my **FOURTH** and **FIFTH LECTURES**, will be clearly seen, and the relation in which man stands to the universe will be more distinctly understood.

As I am now on the doctrine of impressions, I take the liberty to say, that we should endeavor, at all times, to keep ourselves *positive* to the surrounding impressions of nature. We take disease much more easily to fall asleep in an unhealthy spot than to keep awake. While traveling in stages through some low, damp, and unhealthy places in the southern states, and where the mail stage runs both night and day, the traveler unused to that climate should be careful to take short naps during the day, so as not to fall asleep in the night stage. It renders him *passive* and *negative* to the surrounding **IMPRESSIONS** of nature, when she receives no salutary influence from the beams of the sun. These impressions become the *positive* force, and the electricity of the air inspired by the lungs enters the system, disturbs the nervous force and the circulation, throws the whole out of balance, and disease ensues.

1200 An citizen of Charleston, South Carolina, may ride out, in warm weather, three or four miles into the country, and, returning the same day, will experience no inconvenience from the change. But should he remain over night and sleep there, he would, in all probability, have an attack of what is there called "*the country fever*," and in a few hours he might be a corpse, as it is considered to be even more fatal than the yellow fever. On the contrary, a person from the country visiting Charleston and returning the same day, receives no harm. But should he remain over night, and sleep there, the same mournful results might ensue. My views on the *philosophy of becoming acclimated*, in my SIXTH LECTURE, will throw some light on this point. And when we reflect that a person, while awake, is *active* and *positive* to surrounding impressions, we can easily perceive that he resists them, and consequently avoids disease.

In view of the above, it will be readily perceived why one person, even in the wakeful state, will take disease much more easily than another. Those who are firm in mind as a rock, are immovably calm, and have no fear of disease, even when some startling malady visits their neighborhood. These will not take it, even if they visit the bedside of the sick. This determined action of their minds throws a constant and powerful current of the electro-nervous force from their brains and systems, keeps them positive to surrounding

impressions, and enables them to resist their force. But those who are in constant fear of some disease, who are always complaining of their feelings, pains, and aches, keep themselves constantly unwell by thus concentrating their thoughts upon their own systems, and watching each movement. When fever or cholera visits their neighborhood, these are the very persons who are in danger of an attack. Even fleeing to another section will not save them, unless this circumstance should be the means of changing their thoughts and removing their fears. The difficulty is, that fear, as Dr. Mason Good remarks, depresses the vital energy of the muscles, and slackens the motions of life. It causes the mind to shrink back on itself, and to render the system negative to the surrounding impressions of the elements, and thus engenders disease. More than one half the cases of cholera that have occurred during the past year, owe their existence to the fears and excitements of such persons, who, if they had not heard that it was in their midst, would not have been afflicted with it.

The cholera is a sudden collapse of the whole outicle, occasioned by the electricity of the nerves at the surface suddenly retiring to the stomach and bowels. The pores of the skin being closed, the blood and other fluids follow the electricity, and retire internally. The venous circulation is obstructed and weakened, and the fluids seem to rush to the stomach and bowels, and im-

menstrual secretions ensue. Intense fever and inflammation in the entire alimentary canal aggravate the other difficulties, and the storm bursts in fearful terror. The external and internal parts of the system being thrown out of balance in their electrical action, and the arterial and venous circulation having lost their equilibrium, the most dreadful cramps and convulsions ensue. All that is necessary to effect a cure is, to procure a reaction from the centre to the surface, and thus restore the usual equilibrium between the arterial and venous circulation, by equalizing the electricity of the system.

What I have now argued in relation to keeping the mind positive to surrounding impressions, will account for the well-known fact, that an individual sitting with his back to a current of air, while in a state of perspiration, will take cold much sooner than if he faced it. The cause is obvious. The front part of the brain contains the positive electro-nervous forces, under the control of the voluntary powers of the mind, and the back part contains the negative electro-nervous forces, under the control of the involuntary powers of the mind. As the positive forces, under an absolute volition of mind, resist all external impression, so the fact is readily seen why they have more power than the negative forces to resist disease, or any encroachments that may be made upon the system.

I would now remark, that the science of Electrical Psychology, being the doctrine of impressions, throws

an immense flood of light on the human mind, and its susceptibility to the most strange and unreasonable impressions in the power of man to conceive. There are some minds so constituted, that it is absolutely impossible for them to resist the impressions that others may make upon them. This science unfolds what was considered an inscrutable mystery in relation to the conduct of several individuals who perished in the excitement of the Salem witchcraft. Persons of well-known character—yes, of a *stainless* moral reputation—were executed on their own confession! They were charged with being bewitched, and with having bewitched others. They plead guilty to the charge, firmly believed it to be true, and, on their own confession, were sentenced to die, and were cut off from the land of the living. They were in the psychological state. In my public experiments, I have taken persons who are naturally in the *psychological state*, and have produced such impressions upon them. I have made them confess that they were bewitched, and that they had rode on broomsticks through the air to bewitch others, and deserved to die.

Hundreds of instances have occurred in our world, where persons have been charged with murder, have confessed themselves guilty of the deed, and, on that confession, have been solemnly sentenced to die. And yet, before the day of execution arrived, the supposed murdered man was found alive in some distant section,

and hurried home just in time to save an innocent fellow-creature from an ignominious death. Turn to the criminal calendar, and you will find some most striking instances of this character, and that, too, in our own country, and even in New England, the boasted land of light and morals. All such persons were naturally in the *psychological state*, and really believed what they confessed. How many may have, through such means, innocently lost their lives, the opening scenes of eternity alone can disclose. Judges and jurors have yet to learn that no man should be hung on his own confession. If he must die, let it be in the face of the most indubitable evidence, and, even then, let him be recommended to mercy, for often murder, as well as suicide, is committed under some strange hallucination of mind.

LECTURE IX.

LADIES AND GENTLEMEN :

MUCH has been advanced in relation to mind and matter, their various operations, powers, and manifestations, and the countless mental and physical impressions of which they are susceptible. I have also said not a little of the electro-nervous force, as the agent of the mind, and how the functions of every part of the system are executed under its energy. I have proved it to be the connecting link between mind and inert matter, and the agent by which the Creator moves all worlds through the boundless fields of space. I have shown the connection existing between man and nature, and the relationship he sustains to her as an epitome of the universe. As I have made electricity the grand agent that, under mind, moves on all the multifarious operations appertaining to the human system, it may be asked, what proof is there to establish this truth, independent of what has already been offered? If the arguments already advanced to prove that mind touches and moves electricity as its prime agent, are not suffi-

cient and entirely satisfactory, I will then refer you to a visible and tangible experiment, the result of which you can witness, and thus test the truth of my position.

Let any gentleman of eloquence, feeling, and pathos strip up his sleeve, and lay his bare arm on a table where it shall be perfectly at rest ; let him then repeat some impressive poetry, or any prose sentences of stirring eloquence, paying no attention to his arm till his feelings are moved, and at that instant he will see his arm covered with what are called goose-pimples. If he cease speaking, they will gradually disappear, as his mind sinks into calmness. Indeed, he can see them rise and fall with his feelings and emotions. These are occasioned by the redundant electricity which is thrown to the surface by the strong emotions and positive impulses of the excited mind. These pimples rise up at the root of each hair, and as hair is a non-conductor, and resists electricity, so the internal pressure of the electro-nervous force, propelled to the surface by the mind, causes these minute eminences to arise. Electricity is, in its nature, a cold substance. Hence, when the weather is cold, the air, being dense, contains an excess of electricity and oxygen. These, being inspired by the lungs in greater quantities than usual, brace the system, and render these pimples in the same ratio more prominent and visible than in warm weather. This circumstance confirms the proof that it is electricity moved by mind, that causes these to rise when

the feelings are excited by an eloquence that causes even cold chills to pass over the body.

The proof now produced I consider to be absolutely and positively irresistible, and abundant to satisfy any philosophic mind, that electricity is the connecting link between mind and inert matter, and is, therefore, the agent through which the mind manifests its motions and powers. But should this not be sufficient to send a bold and firm conviction to the mind of the greatest skeptic, then I will endeavor to carry the proof still farther, and firmly nail the matter beyond his power to remove it. I will show him how abundant the proof is by which this position is sustained. Let the skeptic place himself on an insulated stool, with his arm entirely bare, and charge his body from a powerful electric machine. The hairs and pimples will rise up even as they do under an intense action of the mind. When the body is electrically charged on an insulated stool, even the hairs of the head rise up erect, and the same result follows when the mind is greatly excited by fear or moved by strong and stormy emotions.

If these evidences are not sufficient to strike the skeptic speechless in his opposition, then let him take a needle, and, after satisfying himself that it has no magnetic power to attract the smallest atom, let him insert it in the nerve of an animal, and it will become sufficiently magnetic to take up fine iron filings. Indeed, ladies and gentlemen, I have no doubt that the

naked arm, under sufficiently strong and stirring emotions of mind to raise those pimples, would, while in that condition, produce an effect upon the electrometer.

We now perceive why the mind, when involved in trouble and distress, has so powerfully affected the body, not only in bringing upon it various diseases, but often sudden, or even instant death. And we moreover see why the mind, when calm, serene, and happy, when buoyant with hope, and animated with confidence, faith, and joy, has produced such powerful and salutary results in removing pains and diseases. We see why, under the energy of such a favorable state of mind, warts, and even king's-evil, cancers, and various tumors have been made to disappear.

Dr. John C. Warren, of Boston, Massachusetts, states, in his work on tumors, that a lady called upon him to ask his advice in relation to an experiment she thought of trying on a tumor with which she was afflicted. It was to rub it with the hand of a dead person; and, as she had a good opportunity, she asked Dr. Warren whether she had not better improve it. He states, that he at first thought of dissuading her from it, but sensible of the power of the imagination, he advised her to try the experiment. She did so, and in a few weeks the tumor disappeared!

Dr. Warren calls it the imagination; but it is the effect of a mental impression, as I have just stated, producing the result by the action of electricity through

the voluntary nerves. The philosophy of this is simple, and in a few words I will notice it.

The old particles of our flesh are thrown off through the electro-nervous force of the involuntary nerves, and by the same force the new particles from the blood are laid down in their stead. Hence the wastes and repairs of the system are about balanced. We change, as I have stated, the fleshy particles of our bodies about once per year, and the bones in seven years. While, therefore, the involuntary nerves are keeping up this balance of power between the wastes and repairs of the flesh, so the same tumor that is thrown off once per year with the other particles of the body, is gradually replaced each year by the same involuntary electro-nervous force from the new particles of the blood. Over this the mind has no direct control, because it acts through the voluntary nerves. Hence when the mind is under the influence of confidence, faith, hope, and joy, organic activity is heightened, and by keeping the mind upon the tumor while in this happy state, and believing it will disappear, creates a surplus of action at that spot through the voluntary nerves, and this surplus action throws off this surplus protuberance to return no more. Such is the philosophy of what is called imagination.

The point being understood how the electro-nervous fluid removes a tumor, the query may now arise in *your minds*, Why does it heal a wound or cure a dis-

case? In answer to this question I would first remark, that I am well aware that the healing properties are in the individual, or in the electricity of the system, and not in the medicine. And the question, *Why does the electro-nervous fluid heal*, has been indirectly considered in my last Lecture, when explaining the process of digestion. Because if all things were made out of electricity, then it is certain that electricity contains all the elementary principles, and therefore all the healing properties of all things in being. All the balms, oils, and minerals in existence are contained in electricity, and in their most skillfully combined proportions. This electricity is inspired with the air into the lungs, and passed through the blood into the nerves of the brain, and becomes the electro-nervous fluid. It is the positive, moving power, in all its one hundred elements, and meets the same one hundred kindred elements that compose the body, and are the negative power. And the positive and negative forces coming together, and the one hundred elements in electricity meeting the one hundred of the same kind in the body, each tending to its own, produce the healing result, on the same principle that they produce digestion, repair the system, and equalize circulation. For a full explanation of this point you will please call to mind my remarks on the digestive process in my last Lecture, and the whole will be easily comprehended.

I now leave this point and call your attention to the brain, which is the palace and throne of the mind, where it dwells and reigns. I shall briefly notice its operations in its earthly house, point out the connection between the voluntary and involuntary nerves through which the mind acts, and conclude by noticing the philosophy of sleep.

I have stated in a former Lecture, that each individual has two distinct brains—namely, the cerebrum, which occupies the frontal part of the cranium, filling the principal part of its cavity, and the cerebellum, which occupies the back portion of the cranium. The voluntary nerves belong to the cerebrum, through which the voluntary powers of the mind act, and the involuntary nerves belong to the cerebellum, through which the involuntary powers of the mind act. And though in their intricate convolutions through every part of the cranium, they seem to interweave and blend in ten thousand ways, and both dive into the spine, and there combine to form the spinal marrow, yet by some secret charm they preserve their entirely distinct character as to their voluntary and involuntary powers, and thus carry out the separate forces of both brains into every part of the entire system.

Our voluntary powers by which we reason, and by which we move our limbs and bodies, being the positive force during our wakeful moments, soon tire, and require the refreshment of sleep to restore them. But

our involuntary powers, by which the heart and lungs are moved, and the functions of life performed, commence their career of action at birth, and often continue it, without any apparent weariness, for seventy, eighty, or even a hundred years. They, however, tire at last, and also require sleep. But when they sleep, it is death. Natural sleep, which involves the sleep of the voluntary powers only in a state of entire insensibility, is so far on the road to death. It is the half-way house to the land of silence. By natural sleep our exhausted voluntary powers are restored, we wake up refreshed, our weariness has disappeared, and we are prepared for renewed action. There is at the same time another important end gained by our insensibility in sleep. The involuntary powers, being left free from the exciting action of the voluntary powers, were allowed to gradually slacken their movements, and regain their true and healthful equilibrium.

In order that this part of my subject may be distinctly understood, I must point out the connection between the voluntary and involuntary powers, and the manner in which they may reciprocally affect each other. Our pulsations are more frequent in the evening than in the morning. This is owing to the mental and physical action of our voluntary powers during our wakeful moments. They, being the positive force, trespass upon the involuntary powers, which are the negative force, and hence one grand object of sleep is

to allow the heart to come down to its due natural slowness of pulsation. The voluntary powers, being the positive force, can of course trespass upon the involuntary, till they become tired out and sink to rest in the sleep of death. This I will endeavor to make plain by the following circumstances.

In the barbarous ages of the world, criminals have been, in some instances, doomed to die through deprivation of sleep. Guards, who took charge of them by turns, both night and day, were ordered to keep them incessantly awake. This they did do by touching them with some instrument of torture, and sometimes with fire, whenever exhausted nature would yield to repose. In such instances the pulsations of the heart are gradually increased above their usual throb, becoming more and more frequent, till between the third and fourth day, when they rise to about one hundred and twenty per minute, which is a fever heat. And so on, gradually increasing, till the seventh or eighth day, when the pulse is only perceived by a tremulous motion, inconsistent with the continuance of life, and the sufferer expires. You now perceive that the voluntary powers, by being kept awake, trespass upon the involuntary powers till they too are tired, and fall asleep; but that sleep is death.

I have already remarked, that when our voluntary powers are exhausted they fall asleep at night, and in the morning we wake up restored. This brought us

~~LECTURE~~
half way on our journey to the door of death, and well may sleep, in all ages, have been considered its emblem. But when the involuntary powers are entirely exhausted by pain, by fevers, or by sickness in general, they also require rest, and therefore fall asleep. This is death. Now, if there were no positive organic destruction, and could the laws of chemistry that decompose our bodies be suspended, and could the entire system, blood and all, be kept precisely in the same condition as it was when we expired, we should wake up after a few days in perfect health. This is no revery of fancy, no chimera of the speaker's brain, but absolutely and positively true, and in perfect accordance with the principles of philosophy. As this subject is new, I will take it into consideration, as it must be not only interesting, but vastly important to us all.

In the first place, we know that the serpent and toad species, the alligator tribe, and nearly all insects, fall into torpidity in winter, and in the spring they are aroused from this state in perfect health, and with regenerated vigor. Not only their voluntary, but also their involuntary powers were asleep. The breathing lungs and throbbing heart were motionless, and the circulating blood was stilled. The raccoon and several other species of animals burrow, and fall into a torpid state as winter approaches, and remain till spring without any sustenance whatever, and then make their appearance without any loss of flesh. In

all these creatures the *foramen ovale*, an opening between the auricles of the heart, never closes, and hence they can live without breathing.

It may, however, be said, that this is by no means applicable to human beings, for they cannot live without breathing. How then do we live without breathing, or even without the throbbing of the heart, or the circulation of the blood, till we were born into existence? I answer by saying, that the foramen ovale was not closed, but generally closes soon after our birth takes place. We know that the new-born infant requires but little air, and can live where we should be smothered and perish. Again, there is occasionally an individual in whom this never closes. It is true, that these instances are exceedingly rare, and such persons are liable, when disease or pain exhausts the involuntary powers, to sink into a torpid state, which has been mistaken for death. The lungs and heart suspended their motions, the blood ceased to circulate, and the limbs grew stiff and cold. Thousands in this condition have been prematurely buried, came to life, struggled, turned over in their coffins, and perished. On being disinterred they have been found with the face downward. Some, placed in tombs, have revived, been accidentally heard, and fortunately rescued. And though they expired with a distressing disease, yet they awoke to life in health.

An instance of this kind occurred in New Jersey,

where an individual was apparently in a state of death. He was cold and motionless. The lungs heaved not; the heart in its pulsations was stilled; the blood was stagnated in its channels, and had ceased to flow. His funeral was two or three times appointed, the friends and neighbors assembled, and through the entreaties of the physician it was postponed to another time. He at length awoke from this state to life, and awoke in health. Some call this singular condition, where circulation is suspended, a trance; but it is the sleep of the involuntary powers in those individuals only where the foramen ovale is not closed. In all other persons it would be death.

In view of these facts we should be warned not to inter our friends too soon after we suppose they are dead. And as death is only the sleep of the involuntary powers, so dying cannot be a painful process, but one that must afford the greatest pleasure and delight of which we can conceive. It must certainly afford as much real enjoyment to die as to lie down upon our beds and sink into natural sleep. All sufferings arise from the nature of the disease that tires out the involuntary powers, and not from the gasping struggles of the dying. The fatigues, toils, and sufferings of the day, that prepare our voluntary powers for a night's repose, are not to be taxed upon the process of our dropping into natural sleep. This is of itself pleasurable, and so is also the process of dropping into the

sleep of death. In this respect it is not "the king of terrors," but the welcome angel of soothing smiles and crowning joys.

You now perceive that though the voluntary and involuntary powers of the mind are entirely distinct, and seem to act independently of each other through two distinct sets of nerves, yet there must be some secret link between the two that unites them in one bond of everlasting and indissoluble union. That this point may be settled as accurately as possible, I must call your attention to the voluntary and involuntary nerves, to determine the connection between them, and also to ascertain the throne of the mind, or in what particular part of the brain it may be located.

Though I have faithfully explained the philosophy of the circulation of the blood in my third Lecture, yet I am compelled to glance at the position in which the arterial and venous circulation stand in relation to each other, and notice the connection between them, and then see if this will not throw some light on the voluntary and involuntary nervous forces of the brain.

The circulating system is in reality two distinct systems. The *arterial* carries the cherry-red blood, which is *positive*, and ever flows from the lungs and heart to the extremities, and the *venous* carries the dark blood, which is *negative*, and ever flows from the extremities to the heart and lungs. The arterial system, commencing at the lungs and heart, divides into

various branches, and these again into others, and so on, till they spread out in thousands of small blood-vessels called capillaries, too minute for the dissecting knife to trace, or the naked eye to see. Indeed, they run out and seem to end, if I may so speak, in millions of nothings. At their terminations, and in just as many millions of nothings, the venous system begins. Though there is no visible connection, that the dissector can trace between the two, yet we know that such a connection must exist, otherwise the blood could never pass from the capillaries of the arteries into those of the veins.

As the nervous system must correspond with the circulating system, so these remarks will prepare your minds for a correct understanding of my views in relation to the *voluntary* and *involuntary nerves* and the throne of the mind. The involuntary nerves have their origin in the cerebellum, which is the organ of involuntary motion, wind round in intricate mazes, and form its convolutions. They pass into the spine, and form the spinal marrow, a part of which is but the cerebellum continued, and from thence they branch out to the heart, lungs, and to all the involuntary parts of the system, so that motion may be communicated to them by the involuntary powers of the mind. They return through another department of the spinal marrow to the brain, and terminate in the medulla oblongata in thousands of nothings, by which I only mean

invisible fibres. In just as many thousands of ~~nothing~~^{things}, the involuntary nerves begin—wind round in like intricate mazes, and form the convolutions of the cerebrum, which is the great organ of voluntary motion. They pass into the spine and form the spinal marrow, which is but the continuation of the two brains, and from thence they branch out to all the voluntary parts of the system, so that motion may be communicated to them at pleasure by the voluntary powers of the mind.

It is evident that the same secret and invisible connection exists between the voluntary and involuntary nerves of the two brains that exists between the arteries and veins of the two circulating systems which carry the positive and negative blood. If this connection between the voluntary and involuntary nerves of the two brains does not exist, then the *voluntary* powers could not, by their wakefulness, produce the least possible effect upon the involuntary powers, so as to tire them out and produce death, nor could they even cause the least disease. And on the other hand, the *involuntary* could not produce the least possible effect upon the *voluntary* powers.

The mind is certainly not diffused throughout both brains, because a part of the brain may be destroyed, and the mind still retain all its powers and faculties. If it were thus diffused, being an active principle, it would keep every organ of the brain uniformly excited.

Hence it appears most reasonable, that the mind holds its throne between the **TERMINATION** of the involuntary nerves of the cerebellum and the **COMMENCEMENT** of the involuntary nerves of the cerebrum. This will appear rational, if we reflect that any sudden, irregular motion of the heart for instance, or of any other involuntary organ, will instantly convey the warning to the mind, and bid it beware. But this sensation could not be communicated to the mind unless it held its throne between the voluntary and involuntary nerves. This, though difficult to determine, seems to be in the **MEDULLA OBLONGATA**. There the royal monarch sits enthroned. From the external world, through one common nerve, he receives all his impressions, and from thence he transmits them by electric telegraph to the various departments of his palace—or, to speak more phrenologically, to the different organs of the brain, and thus manifests the true impression of his character to the world.

In the light our subject now stands, the philosophy of natural sleep can be stated in very few words. Heat expands, and cold shrinks the nerves of the brain. As the *mind* is that sublimated substance we call *spirit*, and is a living being of embodied form, and being the reverse of dead matter, it is its nature to move, and the result of that motion is thought and power. By the shrinking of the nerves of the cere-

brum its motions are stilled, and thought is gone. This is sleep.

I am done, and though errors may be detected, I care not. I have spoken freely, and meant to do so. And though skeptics may sneer, yet I see and feel the full weight, importance, and majesty of my subject. I have every thing to hope for in its favor, as a powerful agent to remove disease, and pain, and to succor the distressed. To hope for good is present peace.

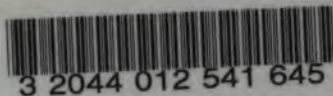
“Eternal hope! when yonder spheres sublime
Tuned their first notes to sound the march of time,
Thy joyous birth began; but not to fade
When all the sister planets have decayed.
When wrapt in fire, the realms of ether glow,
And heaven's last thunder shakes the world below,
Thou, undismayed, shalt o'er the ruin smile,
And light thy torch at nature's funeral pile.”

THE END.



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